

The National Locksmith®



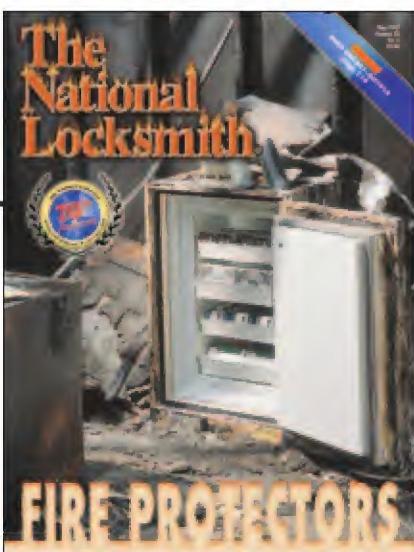
May 1999
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\$5.00

CODES!
AUDI AH1001-AH1918
page 110



FIRE PROTECTORS

On The Cover...



Schwab offers some insightful tips for purchasing and selling fire retardant containers and why a UL label is so important.

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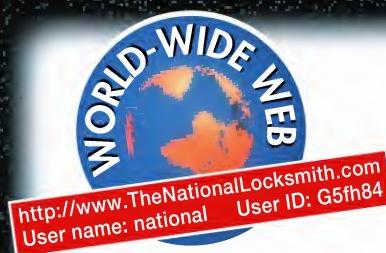
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COMMENTARY



My morning commute: Radio Daze

Like you, I spend a great deal of time in my vehicle. I have a fairly lengthy commute to the office every morning, and the radio helps me pass the time without suffering unduly from road rage. But I have a confession to make. Yes, I listen to shock jocks in the morning.

Ok, I know I would be better off enriching my mind listening to National Public Radio, or perhaps the early morning Mozart concert on the classical music station. However, I am one of those people who needs an early morning dose of caffeine and humor to begin my day.

This morning I was on my way to work. As usual, I was fighting traffic on Chicago's Kennedy expressway. But I was fine, considering that I had a fresh paper cup of Seven Eleven's French Roast coffee, two sugars and one cream, steaming gently in the Jeep's cup holder. From the radio speakers came the typical ramblings of a DJ, on a mission to awaken the sleepy city.

He went through the usual intellectual pursuits of a morning zoo. You know...potty humor interspersed among the commercials. Coming out of a break, the DJ played a taped segment called "Scambo," where he phones businesses in order to goof on them. You know this type of bit when you hear it. They'll call donut shops and tell them they found a finger in their cruller just to get a reaction.

This morning, Scambo called maybe a dozen locksmiths. To each one he told the same story. The bit went something like this.

"Joe's Locksmith."

"Can you help me?"

"I'm sure we can. What seems to be the problem?"

"A girl handcuffed me to the bed, and took my wallet. I'm naked, handcuffed to the bed, and my wife will be home soon from a business trip."

The locksmiths' answers to that problem varied somewhat. Several asked how he could pay since the woman had taken his wallet. When

the DJ said he had a credit card, they told him they only accept cash. To one of those he said he could get cash from a neighbor after they got him out of the cuffs. She replied that she needed to be paid in advance. A couple of the locksmiths simply told him to call 911.

I think the bit was a failure. It really didn't get a reaction from any of the six or seven locksmiths he called. They pretty much all blew him off, but none seemed in the least surprised, let alone shocked.

If the DJ only knew the strange truth about this industry, he probably wouldn't have even bothered, or he would have concocted a more preposterous story. You see, once, years ago, I asked locksmiths to write in to me and tell me their funniest stories that involved padlocks. OK, so I was young and naive at the time. I figured I would get stories about how people couldn't unlock their own sheds and bikes.

Instead, I got a slew of stories so graphic and weird that I couldn't even print most of them. People use padlocks for the strangest things, it seems. The stories I couldn't print would have probably shocked the shock jock.

I took another hit of java, and punched up a new station ...something more intellectual.
Howard Stern.

Marc Goldberg
Publisher

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Receive locksmith info by E-Mail.
Write us at: NATLLOCK@aol.com

Mango's Message

I don't know about you, but there are two obstacles in life that I personally have a very difficult time dealing with. One is the time clock on the wall and the other is rules and regulations.

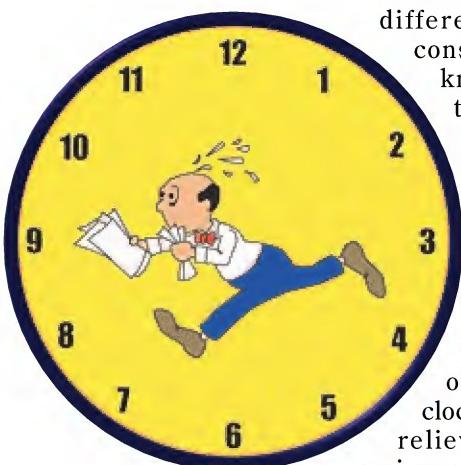
I believe we spend far too much time living our lives according the hand positions on the face of a clock. We get out of bed at a certain TIME. We eat at a certain TIME. We bath at a certain TIME. We go to work at a certain TIME. We end our day at a certain TIME. We watch TV at a certain TIME. We go out at a certain TIME. We sleep at a certain TIME, and on, and on, and on.

I despise living my life according to a time clock as opposed to the natural ebb and flow of nature and personal body cycle. There are days when I don't want to get out of bed at 7:00 a.m. There are days when I don't want breakfast, or lunch until 2:00 p.m., or dinner until 8:00 p.m. Or maybe I want dinner at 8:00 a.m. and breakfast at 5:00 p.m. Why does breakfast have to be at 7:00 a.m. lunch at 12:00 p.m. and dinner at 5:00 p.m.? Is it just because it's always been that way?

What if my body cycle is different than what is considered the norm? (I know many would say that more than just my body cycle is different than the norm!)

Even though I don't like it, to conform with society I am forced to be like millions of others who watch the clock on the wall and are relieved when the train arrives on time. Do you ever

wonder what life would be like without a single clock? What would become of this world if every clock stopped? Would we survive? I don't know the answer to that question, however we will all find out on January 1, 2000 at 12:00 a.m. when the year 2000 (Y2K) phenomenon occurs. There are many predicting mass confusion, food shortages, power outages and basically the end of mankind as we know it,

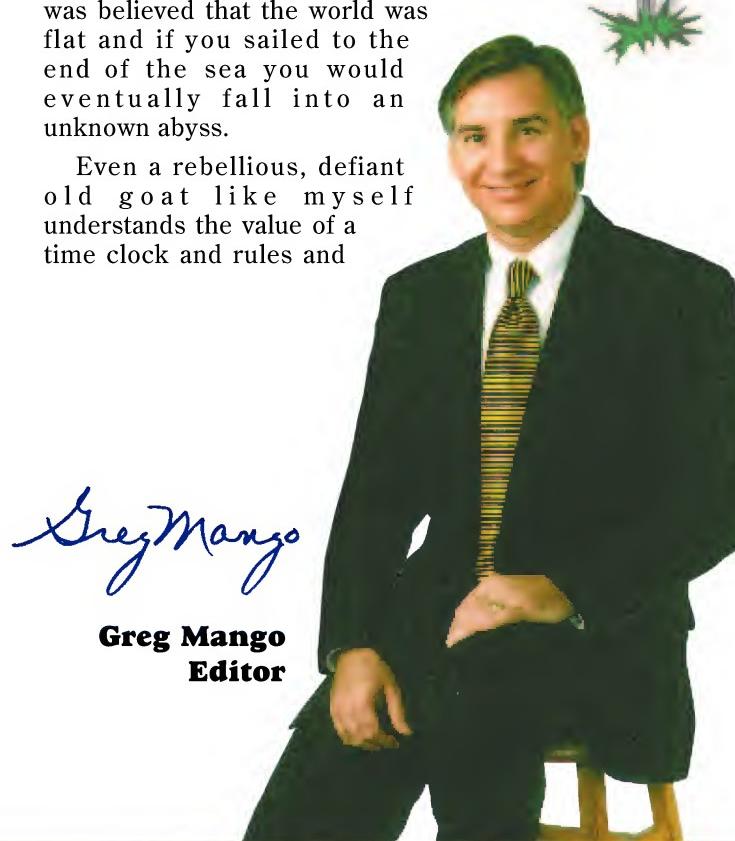


all because of a time clock. I think I'll just sleep through it all.

Rules and regulations are another minor stumbling block for me. I resent being told what I can and can't do, say, see, think or hear. Who makes all these rules up anyway? And just because it's a rule or regulation, does it mean it's absolute or correct? Are there any exceptions to the rule? If there is, why is there a rule in the first place?

I believe that many rules and regulations should be challenged, not necessarily broken, but at the very least challenged. If it wasn't for someone challenging the validity of what they were told to be true, we would not have achieved the technological advancements we enjoy today. Remember, until Columbus discovered America (or claimed he did) it was believed that the world was flat and if you sailed to the end of the sea you would eventually fall into an unknown abyss.

Even a rebellious, defiant old goat like myself understands the value of a time clock and rules and



Greg Mango
Editor

Mango's Message

regulations. They are in place to keep uniformity and civility in an otherwise chaotic uncivil society. I may not like the limiting parameters that surround my life because of them, but I abide by them. (Well, most of them. I still have a hard time with that 55-mph stuff.) Why make a car that can reach speeds of 120-mph or more and then place a limit of 55-mph on our highways? Why test cars to go from 0 - 60-mph and then boast about it, when the most I can do is 55? After all, high performance cars don't kill people, low performance drivers do!

Well, that's enough of my bellyaching, my blood pressure is already too high. Despite what I may like, dislike, agree or disagree with, the fact is, time clocks as well as rules and regulations are here to stay. They are here for a reason and purpose, which is often not understood, even by me.

Recently, a young man was the proud owner of a winning lottery ticket. When he went to claim his prize, his girlfriend announced that half the jackpot was hers because

she paid for half the lottery ticket. The lottery com-

mission investigated and ultimately refused to pay the winning purse. Under the lottery rules and regulations on the back of the ticket, it clearly states that no one under the age of 18 can purchase or redeem a winning ticket. The young man was 19, his girlfriend was 17. Talk about bad luck, or rather, failure to read and abide by the rules and regulations. Should it make a difference how old the winning participant is? No, but those are the rules.

It's surprising how many people participate or subscribe to a contest and never read the rules and regulations. I know firsthand that of those who provide tips for the Technitips column, only a handful ever read Jake Jakubowski's intro when he mentions the

requirements to receive a prize. If they did, we would not receive tips via e-mail with nothing more than an e-mail address for contact information. We have tried, however, as of yet, we have been unsuccessful sending prizes through the phone lines.

If people read the requirements we would be receiving tips with a complete mailing address and not a P.O. Box number. For those that don't know, UPS does not deliver to a P.O. Box number, hence the requirement of including a physical mailing address which includes a street number. Like I said before, rules and regulations are there for a reason.

Including a name and phone number is not a bad idea either, that way if a question should arise regarding your tip, we know who and where to call.

This may all sound rudimentary, but you would be surprised how many Technitips we receive that do not include the sender's name, address or phone number. I know most of you would like to remain anonymous so the tax man can't find you, however, some information about who and where you are is necessary.

O.K., so there are no misunderstandings, here are the Technitip rules and regulations:

You can be any age, race, creed or color to submit a Technitip and receive a prize. You must, however, include your full name (first and last), physical mailing address (no P.O. Box numbers) including your street, city, state, zip code, suite number or apartment number, along with a phone number or e-mail address where you can be reached. If you e-mail or fax us your tip, be sure to include the same information, not just your e-mail address or fax number.

If we receive a Technitip that does not include at least your name, address, phone number, fax number or e-mail address, as well as the name of your first born, mothers maiden name, blood type, net worth and a \$10 donation to the Mango Foundation (just kidding) we will gladly publish your submission, however, you will not receive the prizes you are entitled to. You will have forfeited your entitlement by failing to comply with the rules and regulations.

Over the years we have spent countless hours tracking individuals for an address, or clarification of a submitted tip. In an effort to rectify the situation, Jake has repeatedly published the Technitip requirements to no avail. We no longer have the time to allocate tracking an individual for an address so we can send a prize.

Those are the Technitip rules and regulations. Abide them and everyone will be happy. Ignore them and you will only be shortchanging yourself. Don't allow us to renege on our offer because you didn't follow the rules and regulations. **TNL**

M a y 1 9 9 9

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Need an Eye Transplant

Marc, I spoke with you recently regarding problems that I was having with my new InstaCode update. 'Man', do I feel like a jerk. I tried and tried and tried to get past the registration part with no success. You politely assisted me and my bifocal eyeballs to accept the inevitable — I cannot see as well as I used to, even with corrective glasses. I was entering the number one (1) as a lower case L (l) in part of my serial number. You stated that you would not cuss at me, but please do. I deserve it and will accept it.

Thank you for your polite assistance.

*Michael E. Shearer, CRL
E-Mail*

What Service!

Wow! Thanks for the excellent service guys. I faxed in my order for the new InstaCode on Friday and received it on Wednesday. Incredible!

Thanks again.

*Win Appelt
E-Mail*

Auto Help Line of America

Somehow I missed reading the letter concerning the "Auto Help Line of America" in the January issue. I previously did work for the Auto Help Line of America, however, in December of 1997, I refused to do any more work for this company. I requested that they take my name off their list of providers for the following reasons.

Several weeks earlier I was dispatched for a lockout that was 36 miles round trip. The customer was driving away just as I arrived, which was 25 minutes after being called. The customer stopped and advised me someone had opened his car with a Slim Jim, but stated he would sign my ticket anyway. Wanting to be honest I told him he would not need to sign the ticket, but I would submit my bill to Auto Help Line of America as a Gone On Arrival, because I did not open the car. I billed auto help line \$49.50 (less their 15% discount, which totals \$42.07).

When I received my check from auto help line I noted it was in the amount of \$17.00. I immediately called and was told that they only pay \$20.00 (less 15% - actually \$17.00) for a GOA no matter what the distance is. I let them know I had already called a taxi company and they will not even make the trip for \$17.00. Auto Help Line of America stated this was their policy and they will only pay \$17.00. At this time I advised them that I cannot, and will not, work for this and asked them to immediately take my name off their list. I have not cashed this check and carry it in my wallet to show the members of several locksmith associations of which I attend.



Prior to this I had no problems with Auto Help Line of America and they paid on time. However, I will not work for nothing, and I definitely will not make a 36-mile call (at night) for \$17.00.

*Clarence "Sonny" White
Covington, TN*

A Letter to the Automobile Industry

I am writing this letter to raise awareness in the automotive industry about transponder keys and the American public. I want to start by saying that I think transponders are a good idea. Many cars are easy to force open with few tools and little experience. However, it is important that we do not follow the European example of "closed end" transponders that cannot be generated by a locksmith. When we need a key for our car, we need it now.

I cannot tell you how many people have come to me needing a key for a fairly new BMW or Mercedes and I had to turn them

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

away. Imagine going on vacation, paying for your hotel and entertainment, making plans and reservations for a Saturday night, and then realizing that you lost your only key to your car that is parked in the "loading/unloading" zone of your resort. This man is not going to want to "order a key from the dealer on Monday (if there is a dealer nearby and if Monday is not a holiday). I have had customers curse cars with closed end transponders and swear they would never buy another from that manufacturer.

Programmable transponders offer all the security needed in the automotive industry. A thirty or forty minute programming procedure with special equipment is acceptable to a locksmith, but not a car thief, he will just snatch it with a tow truck and be off to the chop-shop. Let's face it, a closed end transponder is an extreme inconvenience that only keeps legitimate owners from driving their cars.

Paul K. Winkler
South Carolina

Insurance Company Control

I have been thinking about writing this letter for a long time. After reading a Mango's Message in *The National Locksmith* a while back about AAA entering further into our arena of business, I could no longer restrain myself.

I perhaps have a unique perspective on the battle between the insurance companies and the locksmith industry. I have been disabled since 1980 and take a lot of medicine. I have also owned and operated a locksmith company since 1985.

It seems that back in history many of the financially challenged people of this country could not afford health care. The U.S. government intervened and set up, through legislation, the Medicare programs. This was before health care insurance was very popular, before the insurance industry controlled very much of the health care business.

Within the Medicare legislation, the government mandated that pharmacies and other health care providers would provide health care for Medicare patients. The legislation further stated that the health care providers could charge only so much for the service or prescription that they provided in an effort to maintain price control.

Enter the insurance industry. The insurance industry seeing that the Federal government was getting away with capping expenditures for health care services, refused to pay any more for the same services or prescriptions than the Federal government. At first, since only a small percentage of the populace had health care insurance, the medical community allowed this to happen.

Today it is different. The insurance industry has tied up a vast majority of the health care business. Their price control on health care is severely hurting health care providers.

I see the insurance industry entering the locksmith field in much the same way as they have the medical field. They are telling the business owners how much

they will receive for vehicle towing, car openings and auto body repair services. Since the insurance industry controls the majority of the work in these fields, they also control the businesses that do the work.

We, the locksmith industry, have a choice to make now. Do we want the big business insurance industry to control how much we charge for our work? Or do we want to be in control of our business?

If we can accept the insurance industry as our benefactor, then we can sit back and allow them to take the lead in our industry. We need to set our minds properly so they won't make us mad when they start playing games to reduce our wages. The same games they have been playing in the auto opening fields. The same games that so many locksmiths have been writing and complaining about.

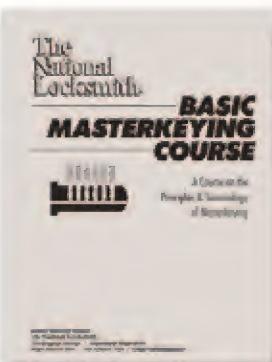
If we can not accept the insurance industry as the controller of our business, then it will be much harder. We will need to unite in mind and spirit. No, not as in a union with dues, meetings, and so on, but with our thoughts. We need to start thinking alike to establish the same goals.

The other day I received a call from a new locksmith business owner. We were talking about business and how to make our business succeed. When he told me that he was working for the insurance companies and that he was accepting a greatly reduced wage from them, I asked why? His answer was that he needed the business because he was just getting started.

If we can all make up our minds, and act in unison, we have a chance of saving our industry as we know and enjoy it today. Think about it. Once you decide whose business you want to work for, set your goals and go for it. Do you want to work for yourself, running your own business? Do you want to work for the other guy the rest of your life? You can not have it both ways.

Bruce Smith

Basic Masterkeying Course



CLICK HERE TO LEARN MORE



#MK - 1

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Armor Cash Dispenser

Armor Safe Technologies is a manufacturer of custom safes for commercial, banking and government markets. Armor focuses its expertise on resolving its customers asset protection needs by applying technology to the design, manufacture and service of a complete line of electronic security vaults, safes and cash controllers to the public and private sector.

The POSiCACHE digital deposit and dispensing safe is designed to meet the change making demands of today's retailers. Management can minimize exposure to armed robbery and internal theft by the reduction of cash levels in cash drawers.

MDS Borescope

MDS Incorporated has recently introduced a new borescope for high-tech safe openings. According to the manufacturer, this new state-of-the-art scope will allow the safeman to view through the change keyhole with ease!

CIRCLE NUMBER
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Features include:

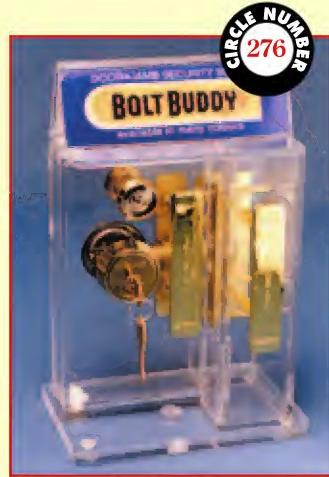
- Small Diameter— 5mm
- Medical, rod lens construction suitable for video display
- Long length— 24 inches
- 65-degree angle view— eliminates the need for mirror tubes

CIRCLE NUMBER
275

Door & Jam Security-Bolt Buddy

Problem: How to strengthen a door and frame weakened by deadbolt installation?

Solution: The patented Bolt Buddy by Door & Jam Security. The Bolt Buddy itself is like a steel vise that helps reinforce new or existing deadbolts or hinges in the door and door frame (single or double, steel or wood). Bolt Buddy and accessories visually and physically help protect families against home invasions, control opening of doors, hinge removal, steel frame collapse, etc. and in many cases help repair previous break-in damage. All Bolt buddy products are essential, effective, inexpensive, Y2K proof, and are highly recommended by security professionals.



CIRCLE NUMBER
276

- 95 degree field of view vs. Hawkeye's 40 degree field-of-view
- Lowest cost in today's market

Marks Locksets for Security Storm Doors

A new four-color brochure assists specifiers and buyers in selecting mortise locksets for ornamental security storm doors. Standard and thin line versions are

available featuring screwless knobs and levers, proprietary no droop lever springs, cylinder collar security inserts and high strength solid steel hubs. Lifetime mechanical warranty applies to all Marks USA products. Handsome design and solid construction have made these ornamental locksets the most popular in the country.

UIP Invisible Hinge

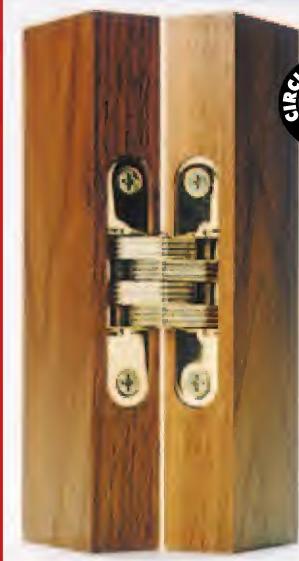
The SOSS Invisible Hinge can be used for most types of applications where no hardware is visible from either side when the door is closed, providing security and a clean look.

Available in many sizes ranging from light to heavy duty, and in a spring door closer, SOSS Invisible Hinges come in satin brass (US4), satin chrome (US26D), polished brass (US30), and polished chrome (US26) finishes.

SOSS Invisible Hinges and closers are also available for



CIRCLE NUMBER
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CIRCLE NUMBER
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fire rated applications starting at 20 minutes to 3 hours.

Lockmasters Keyless Garage Entry Tool

This tool enables the security technician to unlock virtually any overhead garage door that utilizes an electric, automatic opener. All popular brands of doors and openers can be accessed in an average time of ten seconds to one minute! While standing outside the garage door, insert the tool between the door and the frame, hook the emergency release rope and push the door up manually. Each tool comes with complete directions.

New Darex® V190 Precision Drill Bit Sharpener

The new Darex® V190 precision drill bit sharpener is the lowest priced industrial-grade sharpener



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capable of re-sharpening ordinary drill bits into high-performance, self centering, fast cutting, split-point drill bits. The V190 re-sharpens drill bit sizes of 3mm to 19mm (1/8-3/4-inch). Re-sharpen drill bits into the most popular angles of 118 through 140 degrees. Re-sharpen old worn drill bits into like new drill bits in under a minute. As the world's number one manufacturer of drill sharpeners, Darex is famous for ingenious sharpener design. The V190 uses technology found in sharpeners costing thousands of dollars.

Truecraft Tools Cushion Grip Screwdrivers

Truecraft Tools new cushion grip screwdrivers and nut drivers feature durable cushion grips handles for extra comfort, reduced fatigue, and long life.

Truecraft's cushion grip screwdrivers are available in a variety of styles and sizes

including phillips, square, cabinet, standard, and square recess. The steel shaft is constructed of chrome vanadium for durability, while the tips are precision ground. The full hollow steel shaft on Truecraft's nut drivers are also made of chrome vanadium in addition to being chrome plated. The socket ends are precision machined. The handles are color coded for easy size identification.

Securitron PM Series Power Supplies

Securitron Magnalock Corporation has a new addition to its family of power sources, the PM-12-1 and the PM-24-1. Utilizing the same two-time award winning BPS series design, the PM series provides one-amp rated, filtered and regulated, DC battery charging power utilizing a plug-in transformer.

Features include: automatic circuit breaker (no glass fuses) for the DC output; fire



alarm terminal interface for automatic absence of DC power upon fire alarm activation and battery back-up charging circuit for batteries up to 20 amp hour in size. The PM series comes efficiently housed in a 6-inch x 8-inch x 2-7/8-inch metal enclosure.

The PM series is ideal for supplying DC power to a wide array of security equipment including electric locks, CCTV cameras, access control and alarm equipment. The transformer technology allows more installation flexibility for the non-electrician installer. The PM series carry a two-year warranty and toll free sales and technical support from the United States and Canada.

New STI Exit Stopper®

Exit stopper can be used as an alarm to detect persons leaving through fire exits and also as an annunciator to let you know someone has entered through your protected door. Alarm can be set to sound for 30 seconds, 3 minutes or indefinitely (until it is disarmed with a key supplied or there is loss of power). Over 32 options that range from choice of decibel level (120/85 dB) to exit delay mode that allows you to exit after you set the alarm.



HIT-40AR3 and HIT- 40AR4 by Major Manufacturing

Two template guides are available from Major Manufacturing to install the Adams Rite 4501 and 4502 strike used on 4700 series latch locks used on aluminum door installations. Indicator marks on template will assure proper location on both offset and center hung doors. Template will also locate the holes used to install the mounting bracket mounted inside the door. Template HIT-40AR3 is used on the 4502 strike normally used for new installations and the HIT-40AR4 is used on the larger 4501 strike used on retrofit applications. Requires the use of a router equipped with a 3/8-inch outside template guide and 1/4-inch bit.

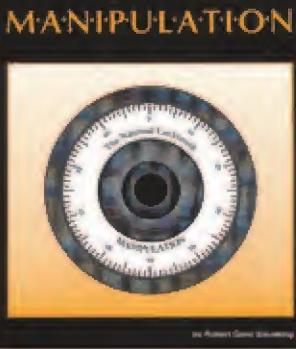


Sargent & Greenleaf Arm-A-Dor

The Arm-A-Dor® secure panic hardware is exit only and cannot be unlocked from the outside. It is UL 305 and UL 10B listed, and meets the hurricane building code compliance in Metro Dade County, Florida. Options include manual or automatic locking, alarm, and double door applications. Provides 24 hours, 7 days a week protection and meets Life Safety Codes. High usage doors to forced entry attack and requiring exit only hardware are ideal candidates for Arm-A-Dor. **TNL**

Manipulation Home Study Course

The National Locksmith
Guide to:



Our home study course guides you on step-by-step process, teaching you everything there is to know about manipulation.

CLICK HERE TO LEARN MORE

#MAN - 1



SELLING FIRE PROTECTION

It's a common public misconception that keys and locks are all that locksmiths know about. Sure, everyone knows that when you're locked out of anything, a locksmith is the guy to call. And everyone knows that when you need new locks and keys for the new locks, a locksmith is the guy to call. After all, those are big parts of your business. But we know that you are much more than the name "locksmith" implies. You are a security professional, and it is your duty to know everything about the business, including the products you carry and what products you recommend. This knowledge will help you better serve your customers and, hopefully, help you receive due credit for the services you provide.



SCHWAB QUALITY

American Crafted

Let's say a customer comes to you and wants to know everything about how to properly store and protect important items in a home or office. It's more than likely this person has an idea about what he or she wants. It is your job as a locksmith, though, to meet the customer's needs.

It's pretty easy to convince a customer to purchase a cabinet or safe. But in these instances, you are not just a locksmith, you are a sales rep and customer service agent all rolled into one. Did you inform your customer about the incredible advantage fire-protective products have in keeping items safe from harm?

That may sound like a loaded question, but eight businesses burn every hour in the United States at an annual cost of nearly \$1.5 billion a year. Unfortunately, seven out of 10 businesses never recover because they did not adequately protect records. These are mind-boggling statistics, yet don't even include the losses caused by house fires.

Ordinary safes and cabinets are sufficient in keeping records organized, relatively free from theft and out of the public eye, but they cannot adequately protect the

records from fire. In the average business fire burning at 800 degrees for 20 minutes, storage products without fire-protection become nothing more than incinerators, scorching and burning paper, rendering computer media useless.

Houses and businesses can be rebuilt. Records, on the other hand - whether paper or computer - can't be retrieved once they are destroyed. And insurance only pays on losses that can be documented, not on piles of ashes and melted plastic.

UL Classification

When researching the effectiveness of different fire-protective storage products, keep in mind there is one thing that separates quality units from the wannabe's - Underwriters Laboratory (UL) classification. This classification indicates the degree of protection a safe or cabinet will provide its contents if exposed to a fire, and UL upholds some of the most stringent standards in the world.

They come about this rating through a battery of three tests:

The Internal Temperature Test

The product is placed in an oven with temperatures raised to 1700 degrees Fahrenheit and then must endure a critical cool down period. A UL Class 350-1 Hr. rating means the product withstood this extreme temperature for at least an hour while keeping its internal temperature below 350 degrees Fahrenheit. A Class 350-4 Hr. rating means the product successfully kept internal temperatures under 350 degrees Fahrenheit after a four-hour exposure to temperatures reaching 2000 degrees Fahrenheit and so on.

The Explosion Test

The product is placed in a 2000 degrees Fahrenheit preheated oven for 30 minutes. The dramatic change in temperature simulates a heat blast the product may encounter in a fire, and can cause many materials, fire-protective products included, to explode. Quite obviously, quality products will pass this test.

The Drop Test (Optional)

While still hot from previous testing, a product is dropped from a height of 30 feet into a pile of rubble. This test simulates a three-story fall through floors during a fire, and quality products pass by not fracturing or losing their protective capabilities.



Why does UL test to such high standards? Because they are critical to protecting the materials the containers are designed to store. Paper, for instance, starts to scorch and burn at temperatures above 350 degrees Fahrenheit. And for products that store computer media, the bar is lowered even further. Throughout the same testing procedures, the interior temperature cannot exceed 125 degrees Fahrenheit and the humidity level can't go beyond 80% without destroying the contents. Any fire-protective computer media product passing UL standards receives a rating of 125-1Hr (or 125-2 Hr. and so on).

Even after all of this scrutiny, a product isn't given UL classification until it successfully protects its contents through the cool down period. This test simulates when a product is not directly in the fire anymore, but still absorbing

large amounts of radiant heat. The period can last for many hours and is also the place where most products fail.

UL classification is much sought after in the fire-protection industry, so be wary of unofficial ratings. Some products boast that they were "tested to UL standards," but tested does not mean the products actually passed. When you see the UL label, you've found a product that is quality-tested, tried and true.

Staying Power

One good indication of how a fire-protective product will perform is by researching the manufacturer. It's important to note how long the company has been in business, and exactly how good of a track record it's kept throughout the years.

As in any industry, new companies and products can arrive on the scene at any time. Manufacturers with longevity have proven themselves and their products, while also gaining invaluable experience. This proves dependability, and betters the chances of the company being around should service be needed for any number of reasons.

The easiest way to gain some insight into the manufacturer's reputation is to tune in to what people are saying about it in the field. Word of mouth is often the

best advertising and a good gauge as to what you can expect from the manufacturer.

Back It Up

There are many different products on the market, each with some form of guarantee or warranty. Don't be fooled! Much like the products themselves, some guarantee/warranties are far superior. If manufacturers truly believe in their products, they'll stand behind them.

Here are three important areas where you should make sure the product is covered:

Sufficient Product Warranty

Each product should have at least a one-year from date of purchase warranty that covers defects in material and workmanship. The majority of defects will be found immediately, but if you haven't had a problem with a product in the first year, you probably won't have one.

Covered Contents Guarantee

In the event that a product fails, every manufacturer should provide the consumer some protection. Schwab Corp., for example, guarantees contents for up to \$100,000. That's a flagship guarantee for the industry.

Free After-the-Fire Replacement

If fire should strike during the life of a product, the manufacturer replaces it at no cost. This makes any product a once-in-a-lifetime purchase. All manufacturers offer warranty/guarantees for their products, but be certain the terms are in writing. Some conditions can be implied verbally, meaning nothing more than the company intends to comply. As many customers can testify, compliance is not always the case. The strength of the warranty/guarantee signifies the confidence a manufacturer has in its products.

Flexibility

The Free-After-Fire Replacement guarantee ensures the customer that the fire-protective product is a once-in-a-lifetime purchase. By recommending a product that has a flexible interior, you are ensuring the customer of exactly the same thing.

In the case of computer media, just look at how many different ways there are to store data. Compact discs, tape cartridges and 3-1/2-inch diskettes are just a few examples, but you get the idea. If a storage product is geared toward containing only one type of media, the consumer would need to purchase a separate product for each media.

Recommend products that can accept these interior storage changes as smoothly as possible and the benefits are at least twofold. For one, you'll spare the customer a lot of inconvenience and save them a lot of money. Secondly, it will

be very apparent to the customer that you had their best interest in mind.

Modern Appearances

It is not written in any manual that a fire-protective storage product needs to look like a fire-protective storage product. And manufacturers have done well in recognizing that cabinets and safes have moved from back rooms and basements into the modern office. Therefore, products with more contemporary stylings are becoming increasingly available.

These products may be easier on the eyes, but they have no problems handling their workload. By being located in an office or high-traffic area, the product offers a combination of convenience and security that no off-site storage facility can match.

Craftsmanship and Materials

Once you become familiar with fire-protective products, it will be obvious which ones are built to last. Nonetheless, you should inspect every product. Is the exterior finish truly finished? Do the doors and locks engage and disengage fluidly? Is the seal tight and well constructed?

Most importantly, know what kind of insulation the product uses for its fire-protection. This insulation comes in two varieties - baked or chemical. Though baked insulation is more than capable, the chemical variety is far superior. It offers a definite weight advantage, since its lighter, and won't cause rusting or musty smells within the product. In addition, the moisture is chemically "locked" in the insulation and can only be released by extreme temperatures, whereas the baked insulation's moisture eventually evaporates.

It's Up To You

This may seem like an extensive list of things to remember before recommending particular fire-protective products, but

it really comes down to common sense. Know all there is to know about fire-protective products and you're opening the door to a market share that is too often ignored.

In a sense, quality fire-protective products are insurance for you and your customers. Your knowledge, recommendations and professional service can only lead to satisfied customers. And, as you may well know, when you're a locksmith that's the key to a very successful business.

For more information on Schwab products contact: Penny Golden at: (800) 447-7233. Circle #397 on Rapid Reply Card.

NL



Locksmithing on the World Wide Web

Part 3

by Billy B. Edwards

BBEdwards@thelockman.com

When it comes to Communications on-line, there are quite a few options here. First there are online forums on everything from Apples to Zoos. An online forum is a place where you can post (leave a typed message), a question about what you are interested in and then check back later to see who responded and what they said. Depending on who is getting on-line and reading the posted questions, it can take anywhere from a few minutes to a few days to get an answer. There are a few forums dedicated to the locksmith industry. A few of the more prominent is Clearstar.com Security Network, alt.locksmithing, TheNationalLocksmith.com and aol.org the Associated Locksmiths of America site.

Clearstar is one of the most popular sites. (*See figure 1.*) Clearstar currently has five forums running:

1. Public Forum
2. Tech-General Forum
3. Automotive Forum
4. Marketplace Forum
5. Safe-Tech Forum

The public forum is where John Q. Public can post questions about locks and the security industry. Questions from getting a combination to a Master padlock to which correspondence school offers the best course give you an idea of the range of the public interest. Needless to say that the combination requests are met with advice to contact a local locksmith who can verify ownership before supplying the combination from his code books.

The other four forums have restricted access and require that you become a member with a user name and password. (*See figure 2.*) Clearstar is run by a working locksmith, when it was



1. The Clearstar.com Security Network web page.



2. Clearstar currently has five forums running: the Public Forum, Tech-General Forum, Automotive Forum, Marketplace Forum and the Safe-Tech Forum.

started it was free, but with the growth to over 500 members and daily posts sometimes exceeding 150, it has become a job to manage it. Jay Long, the Webmaster for Clearstar, has even reduced the hours of his locksmith operation to accommodate the increased traffic. The result of the increased traffic is higher ISP hosting fees, which meant that a membership fee of \$30.00 was instituted this year. I personally think it is worth a whole lot more than that and was happy to become a Charter member.

The Tech-General forum is used for general locksmithing questions and

topics and is also a place where you can express opinions on almost any subject. One of the most common threads (a thread is the original question or comment and the resulting answers), is a request for code information and I have seen some answered within 8 minutes.

The Automotive forum is dedicated to automotive issues. Once again, a common post is for code info, but I have seen questions and answers on everything from how to open an Aspire to removing and fitting a key to a 1963 Rolls Royce to a dissertation on Transponder technology.

The marketplace forum is the place where you can buy and sell equipment from other members. I have purchased two key machines and a Redline generator there myself and bargains can be found every day.

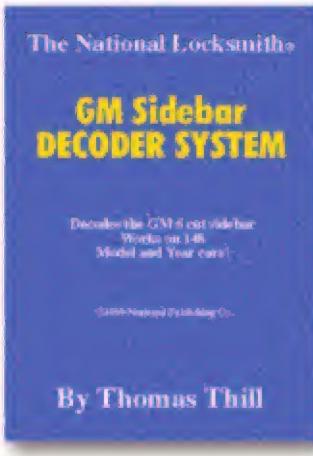
The Safe forum is also the official website of SAVTA. Clearstar members are allowed access to the SAVTA site and SAVTA members are allowed into the rest of the Clearstar site as part of their memberships in the respective organizations. If you are involved in safe work, this is the place to get help when you need it.

Clearstar also has a resources area where some posts are permanently stored and most strictly technical posts are kept on file and can be searched for using a search engine. Locksmiths wishing to become members of Clearstar can apply online at <http://www.clearstar.com> and temporary user names and passwords are available if you want to do a test run for a few weeks.

The "alt.locksmithing" isn't a web site, but a news group. (See figure 3.) It works just like a forum, but is available to anyone on the net via the news reader in their browser. This news group was started many years ago before there was a World Wide Web. The participants there are mostly amateurs who have locksmithing as a hobby and a great many of them restrict their interest in their hobby to picking locks. There are a few professionals who visit there, but they answer unseemly questions in a polite way. Quite often there are questions there from the general public



3. The 'alt.locksmithing' isn't a web site, but a news group.



The National Locksmith
**GM Sidebar
DECODER SYSTEM**
Decode the GM 6 cut sidebar
Works on 148 Model and Year cars!
©1999 National Publishing Co.
By Thomas Thill

GM Sidebar Lock Decoder System

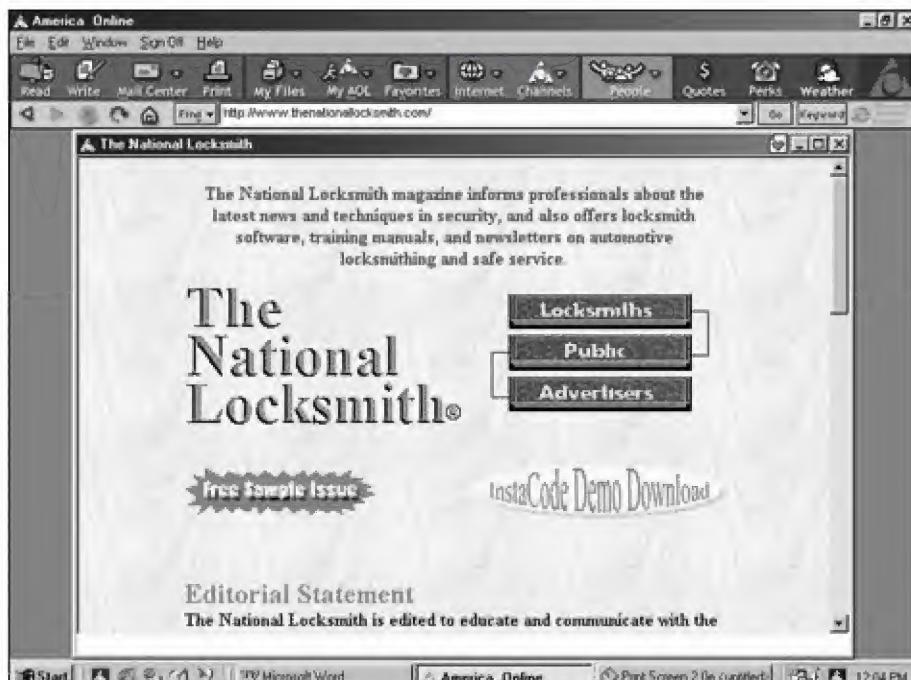
Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

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seeking advice on security matters. There are typically around 16 to 30 posts per day to this news group. Consult your ISP for access to this news group.

TheNationalLocksmith.com web site hosted by *The National Locksmith* offers a restricted secured Locksmith section,

a public access section and advertiser information. (*See figure 4.*) You can also download a demo copy of their InstaCode software program. *The National Locksmith* has also developed the most e-mail activity of all the sites resulting in a very broad e-mail listing.



4. *TheNationalLocksmith.com* web site.

High Security Safes Volumes 1 & 2

The National Locksmith.

High Security Safes

Volume 1

High Security Safes

Volume 1

The National Locksmith.

High Security Safes

Volume 2

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Volume 2

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#HSS, HSS - 2

The secured locksmith section offers cover stories, letters, press releases and Techtips from *The National Locksmith* magazine. There is also a question and answer section and you can order products from the product catalog. New features just added include an online store, technical message boards and article downloads.

The last site on my list is the official ALOA web site. (*See figure 5.*) It has a nice public area where visitors can find information about ALOA membership qualifications, news about our industry and even use a search engine to locate a local ALOA member locksmith. There is also a nice page describing the ALOA certification program.

There is a big part of this site that is restricted and requires you to give your name and membership number for access. There are two different ways to communicate once you are in the member area. First, there is a forum you can use to post questions and get answers. The down side is there isn't very much traffic. All of the forums at the other sites use a format where you can see each message that has been posted and select the one(s) you haven't read yet, but the ALOA site uses a different approach. In the ALOA forum the initial message is listed and you select the thread you want to look at. Once you have selected the thread, you are presented with a listing of all the postings for that thread. You can get to the ALOA site by typing: <http://aloa.org>

One other thing that the ALOA site offers is a 'chat room' in the member's only area. This is a place where you can communicate with other members online in real time. It is currently the only chat room for locksmiths that I am aware of on the net. There is an inherent problem with chat rooms that you may encounter, and that is finding someone in it. Sometimes you can go there and wait for a long time before someone else shows up and other times you will virtually walk into a crowded room.

That brings me to the next communication method used on the net by locksmiths. There is a way around that inherent problem with chat rooms and it is to use an instant messaging system. There are two very popular ones among locksmiths on the web. They are ICQ and America On Line (AOL) Instant Messenger. The nice part is that both of them are free, even the AOL one doesn't require that you use AOL as your ISP.

The two programs have somewhat different features, but the basic function

of both of them is to run in the background while you are on the net. When running, you can check to see if anyone else on your list of contacts is online and they can check for you. Then you can send them a message that they get instantly. The same effect as a chat

room without having to go to a special site. You can get either of these programs as a free download when you get online.

Another means of communicating on the web is via E-mail. I never was much of a writer of letters, but E-mail is

different. No pen to find, paper to fold, envelopes to address or stamps to lick, just type the message and click send. There are quite a few distributors and manufacturers on the web now and all of them have an E-mail address. No more waiting on hold or talking to someone's voice mail, just send them E-mail. Quite a few of those on the web have started to send out regular E-mail to those who want it, for example, *The National Locksmith* has a regular E-mail message that goes out to nearly every locksmith on the web, all you have to do to get on the list is send them a message saying put me on your list.

One last item about the World Wide Web. I found this wonderful place where you can buy almost anything and you get to decide the price. It is an online auction house and recently someone bought a Framon 2 code machine there. Take a look at: <http://www.ebay.com>.

There is no doubt that the World Wide Web is here to stay and most Americans in the near future will be actively on line for communications, commerce, research news and entertainment. Don't be left out.



5. The last site on my list is the official ALOA web site.

TNL

Picking & Impressioning

Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

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#PI

May 1999 • 27

The 1997 Nissan 200SX

by Michael Hyde

Part 1

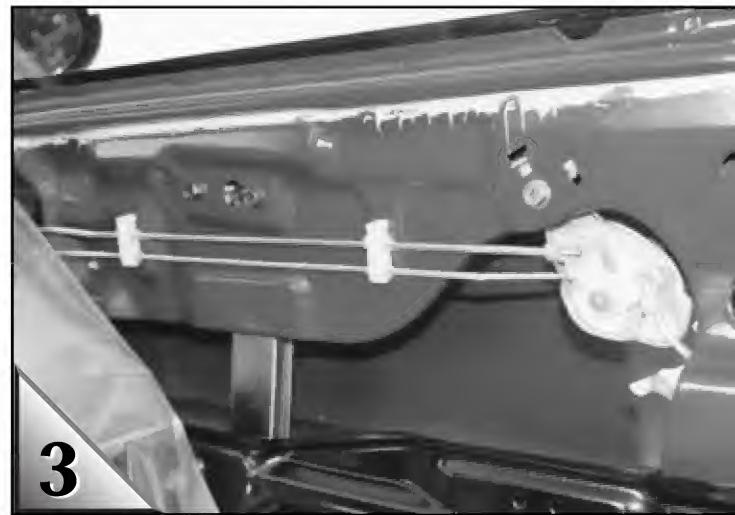


The 200SX is very similar to the Nissan Sentra. There are slight differences, but not much. The 200SX uses the standard Nissan keyway and the code series is: X0001-8000. There are four depths and eight cuts.

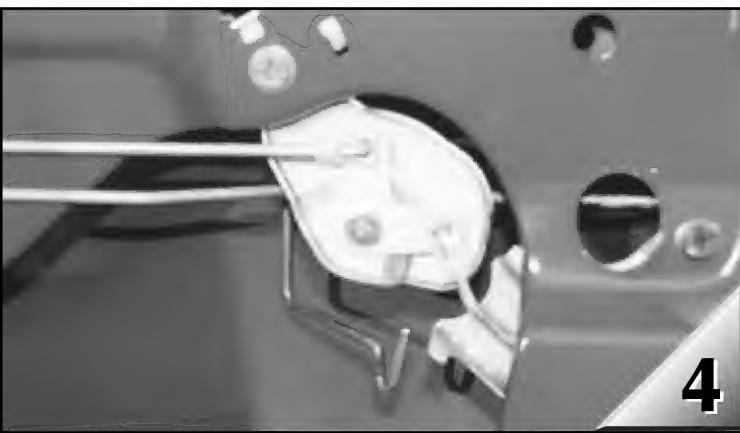
OPENING



Use two good wedges and a reverse slide linkage tool. This particular tool was purchased from Tech-Train.



A view of the horizontal linkage rods. The top linkage rod is the locking button rod.



4

The tool being moved into position. Notice to the right of the tool the metal security channel for the locking linkage rod.



5

The tool is now pushing up on the rod as it connects to the bell crank (or) pivot point.

IGNITION SERVICING



6

The ignition lock assembly is concealed by a two piece plastic shroud. As with almost all Nissan's there is no active retainer for easy removal of the ignition cylinder. Therefor removal of the entire lock assembly is necessary.



7

First, pop off the plastic trim around the front of the ignition face.



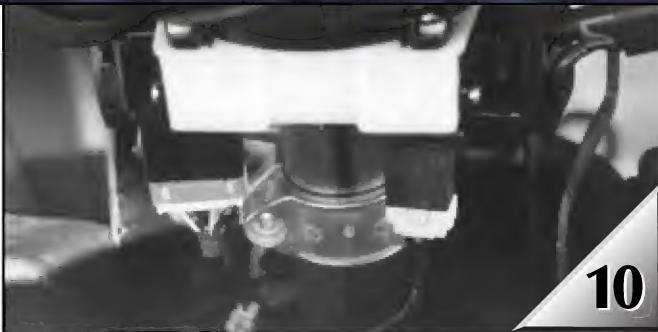
8

There are four Phillips head screws that must be removed to separate the plastic two piece shroud.



9

Once the screws are removed, you can unsnap the plastic shroud and remove it.

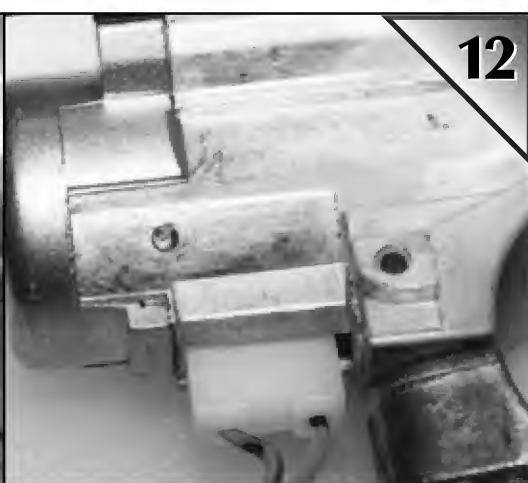


the bolt. Another method would be to use a die grinder (Dremel) to make a slot in the bolt head and unscrew it with a flat-blade screwdriver. Even another method would be to use an awl or long pin punch to tap on the edge of the bolt, at an angle, in order to unscrew the bolt.

Making sure the battery is disconnected, you can now remove the shear-head bolts. The shear-head bolts can be removed by drilling a hole in the center of the bolt and using a "EZ-OUT" to unscrew

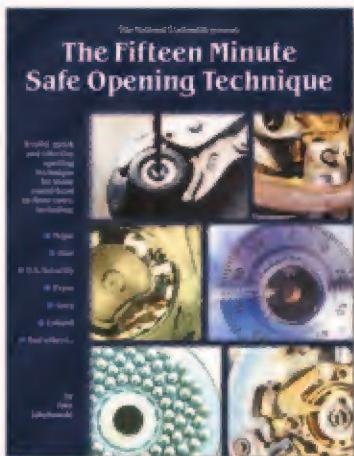


The ignition lock assembly is pictured.



There are two roll pins, one on each side of the lock that need to be removed.

15 Minute Safe Opening



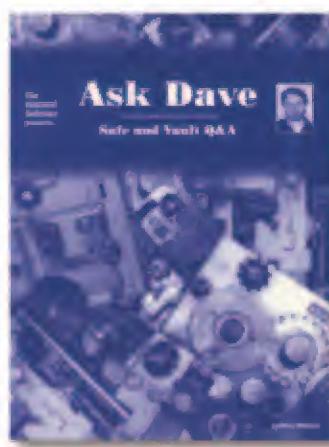
This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

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#JJ - 1

Ask Dave



You asked.
He answered.
This is safe
and vault
Q&A with
an attitude.

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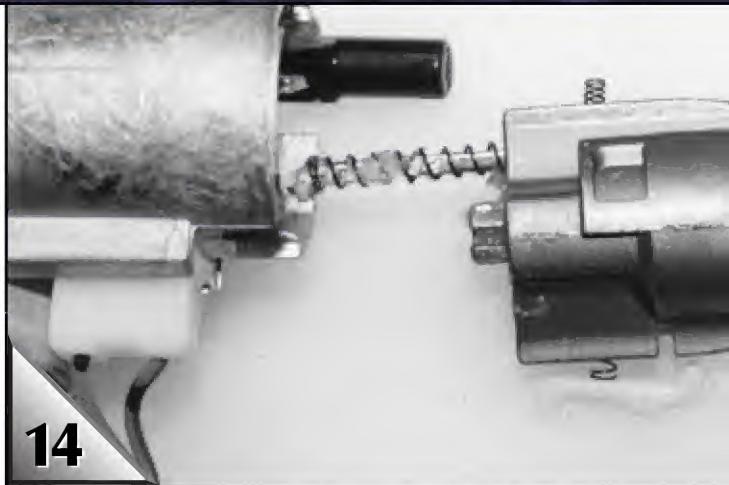


#AD - 1



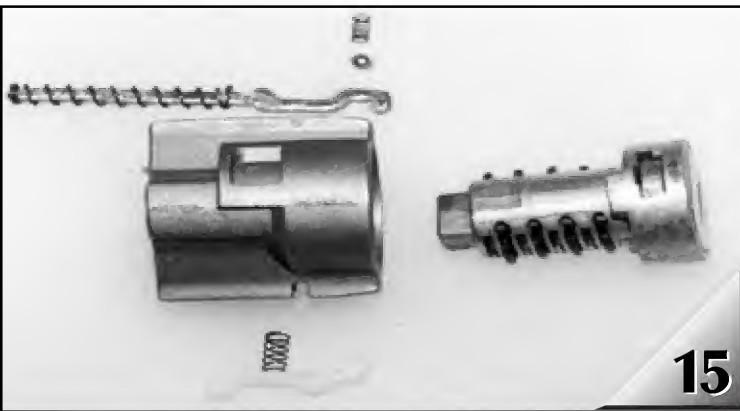
13

Once the two pins are removed you can then pull off the lock face cap.



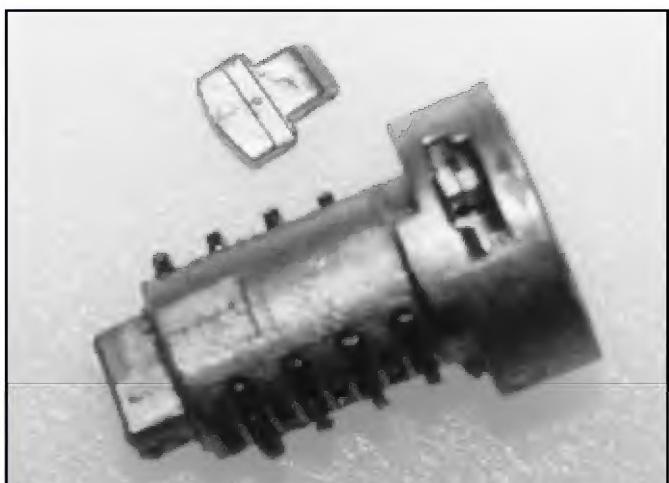
14

The cylinder can now be removed. Be careful of the spring and ball bearing that sit on the buzzer lever.



15

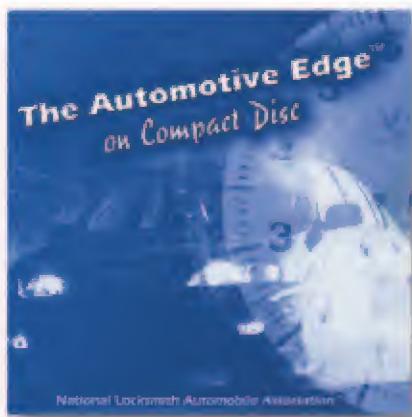
A view of the cylinder plug removed from the cylinder housing. The plug contains all eight tumblers.



16

The cylinder plug has two small actuators that fit into it, one on each side. Be careful not to lose them.

AutoEdge



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#AE - CD



Next month we conclude with the door lock and trunk lock servicing. See you then.

TNL

Ilco 693 Group 1

Combination Lock

by Charles Stephenson, CPS

popular
design and very
comfortable for
most users.

The Ilco model 693 appears from its outer appearance to be a "normal" combination lock, but this one requires a cover (*photograph 1*) from its four-wheel cousin. This fact is essential to keep in mind. The extra height of the cover means it requires a four-wheel change key. The photographs reveal that the thicker cover is necessary due to the "extra hardware" atop the wheel pack.

With the cover removed and some of the components removed we discover a very different looking combination lock. (*See photograph 2.*)

The cam has had a "second story" added to it which is in the shape of a "D." The metal plate, which is called the slide, rests on the cam and bearing end of the lever. The open end of the slide (forks) are placed over the lever screw and a nylon washer is placed over the forks and around the lever screw.

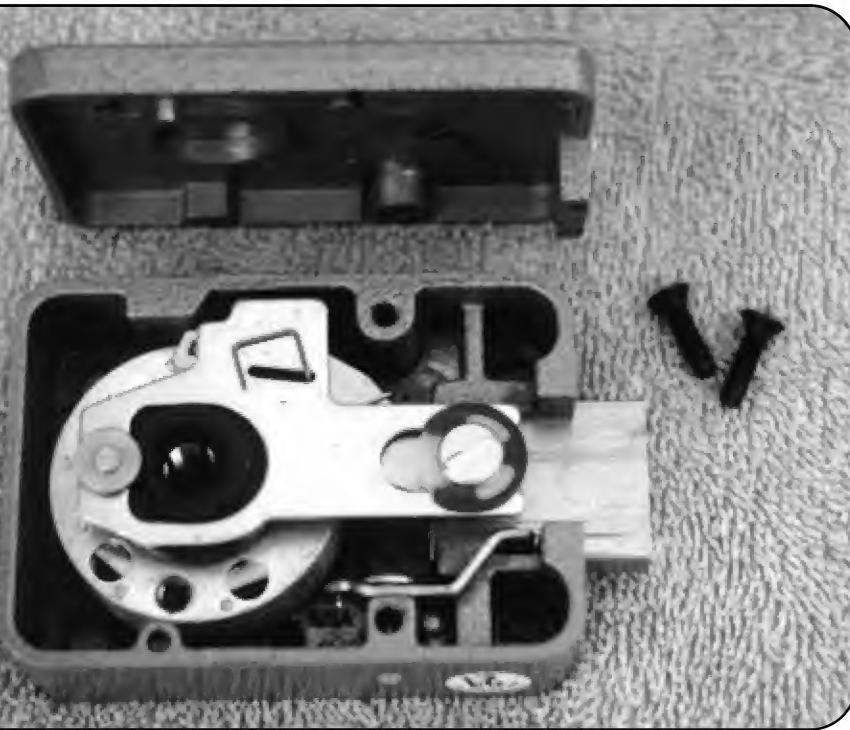
The nylon washer and the forks of the slide are secured in place by snapping an E washer onto the top of the lever screw. The forks of the slide allow the lever screw and lever to travel during bolt retraction.

Whenever the slide is positioned onto the cam and lever, a spring located in the top of the slide must be inserted into a small hole in the lever. The hole is in the edge of the hole in which the fence is soldered. (*See photograph 3.*) The lever retains its normal lever spring to assure proper action when required to "drop in" the gates of the wheels and cam to actuate the locks opening.

The spring connecting the slide to the lever serves to hold the lever up until all gates are aligned. This prevents the nose of the lever from contacting the cam and therefore do not allow for reading the contact points. During the retraction of the bolt the spring will travel from right to left in the upper center slot of the slide.

The roller on the slide rides on the D shaped section of the cam. As the cam rotates the pressure on the roller transfers to the spring and gives lift to the lever to assure it holds the lever nose away from the cam.

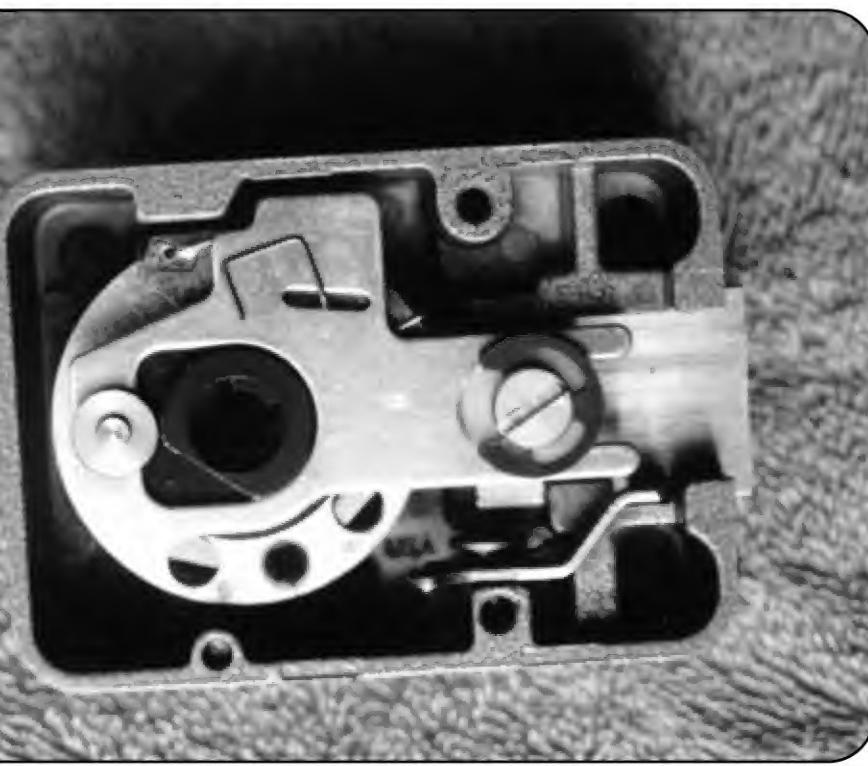
Once the gates of the wheels are aligned under the fence (the third number has been dialed) we reverse direction to begin the opening



1. Notice the deeper 4-wheel cover needed for the Ilco 693.



2. Without the slide, E-clip, nylon washer and special cam, the Ilco 693 appears to be an ordinary safe lock.



3. The spring in the slot of the slide has changed positions during bolt retraction.

rotation. When the dial reaches approximately 20, the roller on the slide will be on the bottom corner of the D shaped cam. (See photograph 4.) During the rotation the lever nose enters the gate of the cam while the roller (on the slide) is traveling from the bottom corner of the D to the

upper corner of the D. This area corresponds with 20 down to 0 on the dial. The retraction of the bolt is complete at 95 on the dial.

The proper installation of the Ilco 693 is essential, as it is with all combination locks. You have noticed from the photographs that the cam on

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#SUB - 1,2,3,4,5,6

the 693 lacks the familiar splining indicators (RH, VU, LH and VD). Upon threading the spindle into the cam until snug, you must align the roller on the slide to the flat side of the

D on the cam. Back the spindle off until the number 10 (approximately) is aligned with the opening index on the dial ring. You may now insert the spline key (flag over the spindle) and

tap with a small mallet or hammer until fully seated.

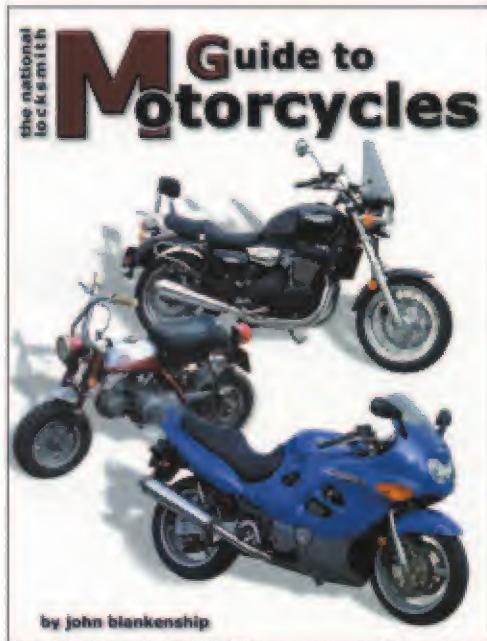
Please remember and make a habit of always using a new spline key. This is a press fit and the dimensions of the spline key are lessened upon use.

The Underwriters Laboratories specifications call for 20 man-hours of expert or professional manipulation resistance before a combination lock can be listed as a Group 1. This is only one of the many specifications a lock must meet but the one we most commonly refer to when differentiating between the groups. The other specification quoted commonly is the one full dial graduation on either side of the proper graduation for each wheel. This of course refers to the stricter tolerances in gate width for Group 1 (and Group 1R) locks.

For more information on any of the Ilco Unican Corp. mechanical safe locks you may contact your distributor or Mitch Stover, Product Manager at (336) 725-1331 Extension 248 or circle 290 on Rapid Reply.

TNL

4. Notice the roller and cam position as the lever nose drops in.



Guide to Motorcycles

For years locksmith have begged for a comprehensive service manual on motorcycles and its finally here!

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#MOT - 2

Combination Lock Manipulation goes **HIGH TECH**

by Michael P. Swierzy

A sure sign that a safeman is an expert, is his or her ability to resolve a lockout quickly. Being able to do so without scarring or keeping the safe out of service very long, confirms that this person is a specialist. Significant additional business, generated by word of mouth from satisfied customers is just one of the many benefits of being recognized as a trained professional. Needless to say, the preferred method that is most often used by these master trades people to open a safe is the technique known as combination lock manipulation.

Manipulation can easily be considered a high art form when practiced by those who use it efficiently. As with all art forms, constant practice is essential by those who wish to attain the highest degree of proficiency with it. And make no mistake about it, combination lock manipulation requires a great deal of concentration coupled with a lot of interpretive skill.

It's really the interpretive part - taking accurate readings from the dial face - that puts your abilities to the test. Of course, an easy lock (one that produces differences in readings on the order of a fill line width, .040") or years of experience will suffice to make the job seem easy. On the other hand, there are locks that will bedevil even some experts. You may have come across one of these locks while on a call. If you are not successful in opening this type of lock in a timely fashion, the result can be embarrassment in front of a customer who's in a hurry and whose idea about opening a safe came by way of a "B"

movie on the late-show. I'm sure that you get the picture.

While your reputation is important, what I'm really driving at here, of course, is whether or not you can do the job profitably. Time is your most important asset and the process of manipulation can be time consuming. It is therefore very important that you identify a difficult lock quickly so as not to waste too much of your valuable time on it.

You should always strive to make your manipulation technique as efficient as possible, thus reducing the possibility of wasted time or, ultimately, not being able to open the lock that you

are working on. This is the issue that I wished to resolve in my own attempts to manipulate various combination locks and which led directly to development of the method described herein.

Another way of putting into perspective what I've just said is this: by reducing the chances of an error creeping into your contact point readings, you increase both your speed and your chances of opening a lock. That is why I came up with my Laser Aided Manipulation (L.A.M) technique that I will describe to you. With this method, you will typically see differences in contact positions being



There are five essential elements that comprise the L.A.M. system.

Photograph 2



A class IIIa or IIIb adjustable focus laser diode module or common laser pointer.

magnified by a factor of 20-100 or more. This will make generating accurate data much less time consuming. Finding wheel gates will, as a result, also be easier. Another great benefit derived by using L.A.M is that you will quickly be able to identify locks that are very difficult to open using manipulation; these should be drilled instead. Last but not least, using L.A.M also reduces the eye fatigue caused by staring at a minuscule part of the locks dial face over a long period of time.

— HOW IT WORKS —

Have you ever tried to manipulate a Sentry safe, the one where the fence is actuated by the door handle? If so, than you may have attached a long pointer to the end of the handle to facilitate taking your readings. What's interesting about this procedure is that the longer the pointer, the easier it is to make out even minute differences in the distance that the locks fence drops into the wheel pack. L.A.M is basically a space-age refinement of this technique.

Instead of using a steel pointer that would be awkward as well as destroy most of the locks feel, you use the photons contained in a laser beam. The other major difference with the pointer on the end of the handle method comes from the flexibility of being able to increase the distance that the laser beam travels from the dial face. Again, as with the steel pointer, the longer the path, the greater your readings will be magnified.

Once you've understood L.A.M's principle of operation, you will be able to conveniently take your readings from on the ceiling, an adjacent wall, the floor or even from a sturdy table next to you. You see, laser beams can be easily bent to almost any configuration without losing their effectiveness or accuracy.

— NECESSARY COMPONENTS —

Now, let's get down to the meat and potatoes. There are five essential elements that comprise the L.A.M. system. (*See photograph 1.*) They are: a class IIIa or IIIb adjustable focus laser diode module or a plain old laser



A home-made C cell power supply.



A beam splitter/prism or mirror.

pointer (*see photograph 2*); a power supply (*see photograph 3*); a magnetic base with adjustable arms; a beam splitter/prism or mirror (*see photograph 4*); and a target (*see illustration A*). The sixth element - a front surface mirror that is glued to a magnet (*see photograph 5*), is optional. If you are content with taking readings from the top of the safe or even the ceiling, this mirror is not required.

The power supply for the laser can be easily made up with a couple of batteries that connect to the laser through a flexible cable. My own version has a few magnets inside so the whole unit can be stuck to the safes steel walls.

The power supply consists of a Bakelite enclosure, a power plug and a

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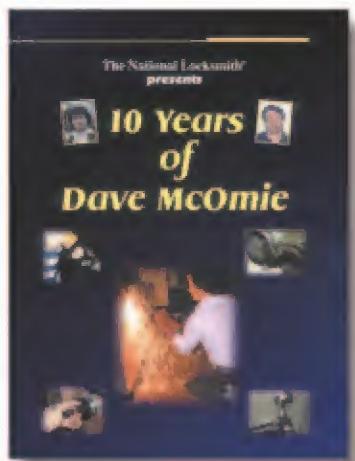
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Illustration A

Laser Target

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toggle switch. On the inside is a battery holder (C size is fine) wired in series. The flexible cable used to connect the power supply with the laser pointer is about three feet long. I use a piece of type TR-64 flexible coaxial cable for this purpose, but any other two conductor cable that is light and flexible will do.

What makes building this power supply so easy is that you can get all of the required parts from your local Radio Shack store.

— HARDWARE INSTALLATION —

First, find your right contact point on the dial which is usually somewhere between the numbers 10 and 20. (*See photograph 6.*) Use a light touch to just bring the fence lever nose in contact with the right drop-in point of the drive cam. Now with a bit of Krazy Glue, affix the beam splitter/prism or mirror onto the dials center so that the output of this device is pointing straight up. Don't worry if things don't line up to be perfectly perpendicular to each other, it isn't that important.

I use a threaded base that I first affix to the dial (*see photograph 7*) which accommodates a hex head screw that can be locked in place with a set-screw on the side of the base. (*See photograph 8.*)

The base is made from Aluminum to keep it light. Avoid making it heavy as that may destroy the lock's feel. The center hole is tapped to 5/16-18 thread, but you can use a bolt and thread of your choice.

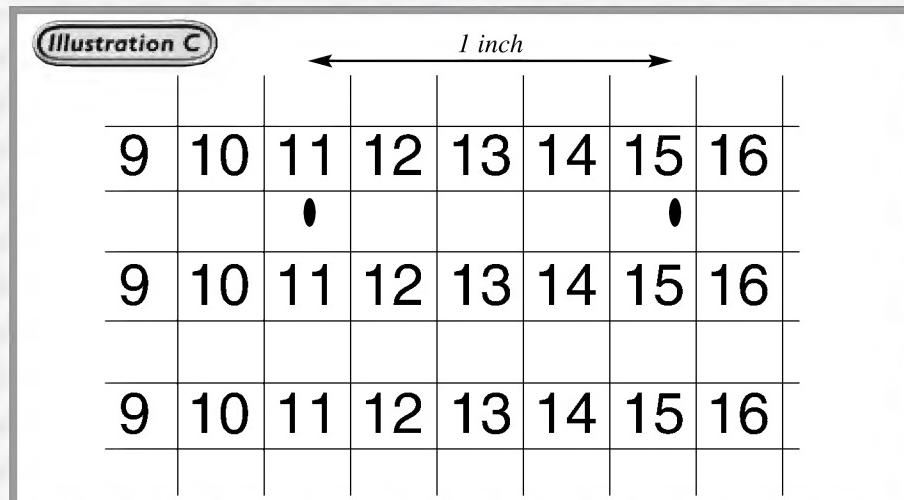
This adjustable base allows me to position the beam splitter/prism or mirror on the hex head bolt and lock it into any position while also allowing for height adjustment if needed. The bolt is also used to break the bond created

by the glue between the base plate and the dial's surface by acting as a puller. Just drive the bolt into the base plate until it bottoms our on the dial. Give it one or two turns using a small wrench and the base plate will snap off.

Next, set up your magnetic base and arms so that the laser beam has access to the input of the splitter/mirror that is now glued to the dial. You can emulate the set-up in the *photograph 1*, or you can adapt any other configuration you may wish. In this situation I have placed the magnetic base on the safes door. A much better place would be to place it on the top of the safe, if possible. The reason for this is to give your magnetic base a much firmer hold.

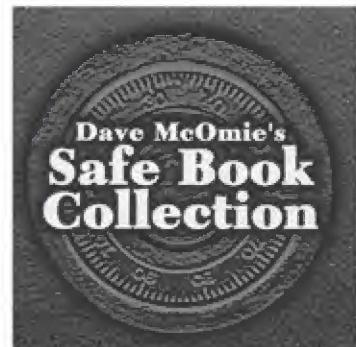
What I've just said leads to an important consideration if you are to be successful using L.A.M. Overall, the more solidly your magnetic base sits, the easier it is to get accurate and repeatable readings from the target. Don't try to save money on a cheap base. Get the most massive one possible that doesn't interfere with the lasers optical path or cannot be conveniently attached to the smallest door you might end up servicing. My own unit has a magnetic surface that measures 3"x 3" inches.

Clamp the laser diode module (or laser pointer) onto the end of articulating arm B. (*See illustration B.*) Turn on the laser to focus its beam onto the input portion of the splitter/mirror. By using a piece of paper, you should now see a beam that exits from the top of the splitter/mirror. This beam should traverse the dial completely without hitting arm A (*see illustration B*) or any part of the safe door. In fact, when



Place the target so that a red dot appears on a reference line.

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Photograph 5

A front surface mirror that is glued to a magnet.

you've done the alignment correctly, you should be able to see a bright red spot on the ceiling above you.

Of course, you may now also direct the beam towards either the floor or an adjacent wall by using a front surface mirror. Making one of these up is really simple. Just glue the mirror onto a large, flat magnet. Then you can place this contraption onto the safes steel door so that it sits in the laser beams path. By carefully moving the mirror around with your fingers, you can make the red dot appear just about anywhere within 360°.

The laser diode module that I use is shown in *photograph 9*. It shows the two conductor male phono connector that was substituted for the original shirt pocket clip and plug. Fortunately this particular phono connector plug had the correct threads and went in nice and easy.

— SAFETY PRECAUTIONS —

At this point, I would like to take a moment to talk about laser safety. The optical power of a class IIIA or IIIB laser can be an eye hazard if you look directly into the beam. These lasers depend on your eyes blink reflex to avoid retinal damage. Do not stare directly into the beam. My suggestion would be to wear the appropriate laser safety goggles before the laser is turned on.

— BACK TO WORK —

Once you have the lasers output directed towards the surface that you want, it is time to place a target (*see illustration A*) so that a red dot appears



Photograph 6

Find your right contact point on the dial which is usually somewhere between the numbers 10 and 20.

on a reference line. (*See illustration C*.) Experience has shown that the best point on the target to start with is in the middle. This will now serve as our artificial right contact number.

The last step is to focus the beam. Turn the focusing ring on the lasers business end either right or left until the dot on the targets surface becomes as small as possible. If you are using a laser without any focus adjustments (i.e. a laser pointer for instance), all is not lost. You can make what is called a spatial filter out of two small pieces of masking tape. Stick both pieces on either side of the splitters output side so that the beam is left shining through a small slit. Amazingly, the red dot that sat on the target has now turned into a thin red line! This slit will increase the accuracy of consecutive readings by making each of them much easier to identify.

From this point on, proceed with manipulation in the normal way, but instead of fatiguing your eyes by studying the dial-face, look to the target for an easy to read number.

— WHAT YOU SHOULD AND SHOULDN'T SEE —

As the dial nears the right-hand contact point, try closing your eyes as you feel the levers nose make contact with the drive cams drop-in point. Now, open your eyes and note where on the target the laser beam has landed. Do this a couple of times keeping the same position for all 3 or 4 wheels. Each time that contact is felt, the laser should fall on the same spot, time after time. If it



Photograph 7

I use a threaded base that I first affix to the dial.



Photograph 8

The hex head screw can be locked in place with a set-screw on the side of the base.

does, it is a good indication that you are using the right technique in your movement of the dial. If it doesn't, it can mean one or more of three things:

• Spurious Vibrations

The magnetic base, mirror(s), or the safe itself is moving from vibrations. A fast way to check if this is indeed the case, is to rap your fist

Photograph 9



The laser diode module I use shows the two conductor male phono connector that was substituted for the original shirt pocket clip and plug.

lightly on the safe or surface that the target is attached to while the dial is kept stationary. If you notice any movement of the beam over the target while doing this, it means that your set-up is not solid enough. Spurious, unusable readings will be the result.

• Excessive Distance

The distance between the laser and the target is too great. I normally keep this distance between 6 inches and around 10 feet. I'm sure that it's possible to use even longer distances except that at one point you may start to read noise in the form of random vibrations instead of a true indication. Around areas where there is heavy truck traffic, lots of foot traffic on a raised floor or if the safe is located in one of the upper floors of a tall building, this may become a problem.

• Touch

If you don't get consistent results from, say, a practice lock that you have successfully opened before by using manipulation, it may be that you are not moving the dial correctly. Too much pressure and you miss the contact point completely. Too little pressure and you may be hanging up on something other than the correct contact point. Practice till you get it right. You will see that L.A.M is a superb tool that can be used to great advantage in order to refine your touch before you go out into the field.

• The Impossible Lock Syndrome

I've saved the best for last. If after running a couple of numbers, you still fail to get consistent results even after all of the above mentioned pit-falls have been accounted for, as well as eliminated, than there may be an anomaly in the lock — either externally or internally.

Some of the external factors that are detrimental to effective manipulation can sometimes be brought down to manageable levels through the judicious use of a soft headed hammer

applied to either the dial or the dial ring. Persistent inconsistent readings usually indicate that you are not likely to get very far with this lock by using manipulation. In fact, the probability that you are wasting your time is high. Switch to another method immediately. This, I believe, is one of L.A.M's best attributes. It will identify a problem lock for you in short order.

If none of the gremlins listed above are present, your technique is good and your set-up rock solid, expect to see a 40 thousandths inch line (the value of one line width on the dial face of an S&G 6700 series combination lock) magnified to around 4 inches if the spacing from the dials center to the target is 9 feet. That's a magnification of 100!

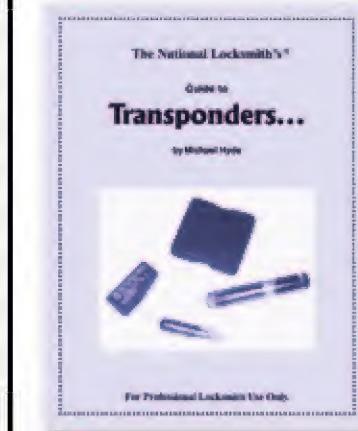
Now consider the advantages this offers when attempting to manipulate a lock. Using only your eyes, are you able to routinely spot a change of 1/4 of a line width? If you can, your concentration has to be darned good because that 1/4 of a line translates into only 0.010 inches of movement on the dial. Keep the Advil handy if you have to do this for an hour or more.

Using L.A.M on the other hand, you are looking at a change of one inch if the readings are magnified 100 times. As you can see (pun intended), spotting even minuscule changes becomes easy using L.A.M.

— SOME FINAL THOUGHTS —

My sincerest wish is that the method that I have just described will be useful to you. Please consider what I've written as a guide only. While I'm sure that success with this method will come, it will be achieved much more quickly if you devise your own strategy for its use. Practice and more practice with L.A.M will ensure your complete confidence with using it on a job. As for me, L.A.M has added a new dimension to what I already knew about manipulating combination locks. **TNL**

Transponders

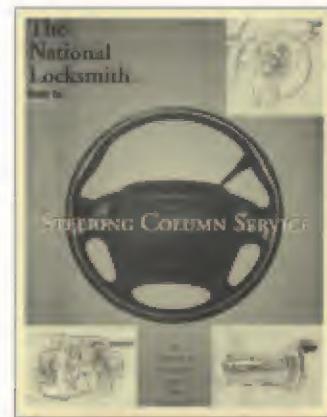


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#GM - 2

Packed & Rarin' to go with Weather Guard®

by Jake Jakubowski

Part
2

Last month I redecorated my service van interior and told you that I was one "very pleased locksmith" with the new WEATHER GUARD® interior. This month I will show you how much more effectively I can work within an organized interior.

Something that even I didn't know when I first brought my newly outfitted van home is, the WEATHER GUARD® interior package that Fontaine Truck Equipment installed, is even better than I originally thought.

Like most mobile locksmiths, I spend a great deal of time in my van. Unlike many mobile shops, I travel about 36,000 miles a year servicing customers. That means two things, I have to carry a lot of inventory in preparation for the unexpected service request and I spend a lot of time behind the windshield and service area of my van. The key to efficiency is organization, which this WEATHER GUARD® interior offers me.

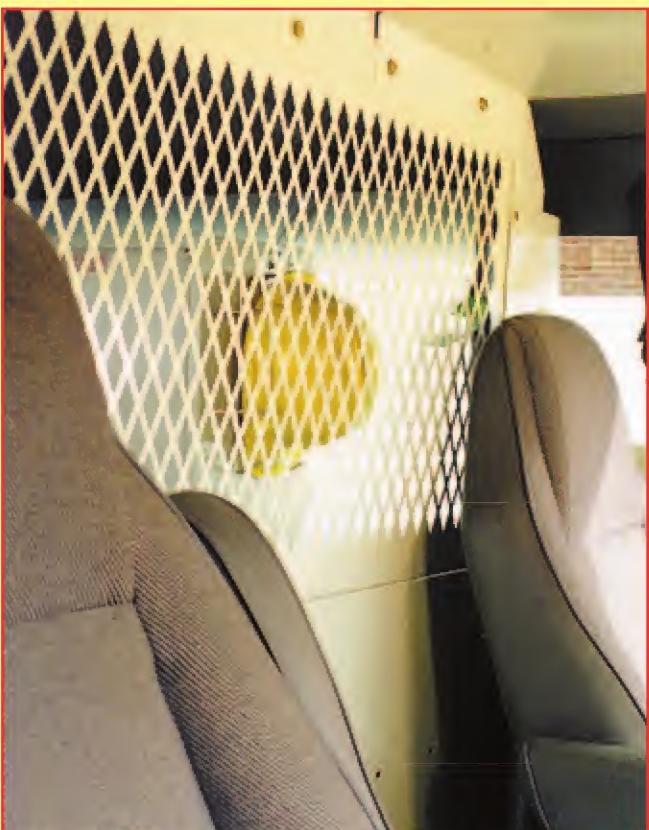
The file box unit that was installed between the front seats helps me keep files, schedules, keying charts, flyers and catalogs that I need organized and handy. (*See photograph 1.*) It also gives me a reading/writing surface that's convenient. Additionally, there's a little bit of storage for my ticket book and, inside the file box is a tray where I keep some personal items that I want to carry. (*See photograph 2.*)

Next there is the bulkhead that separates the driver's compartment from the work area of the



2. Interior of the file box.

3. The screen bulkhead.



1. The file box.





4. The Itemizer® 4-drawer unit.

van. (See photograph 3.) The bulkhead serves two purposes, it will keep stuff from flying forward and hitting me in the head if I have to make a panic stop, and most importantly, it offers security for the inventory I'm carrying.

Behind the bulkhead is WEATHER GUARD's Itemizer® drawer unit. Last month I told you that the Itemizer® drawer unit gives me about eight cubic feet of storage area in four large drawers that extend nearly four feet when opened. (See photograph 4.) The Itemizer® drawer unit comes with drawer dividers that allow me to partition off each drawer so I can organize the inventory that I carry. (See photograph 5.)

Since I can only open the Itemizer's drawers when the side door of the van is open, I tend to carry inventory in the Itemizer® drawer unit that I do not need to access every day. I have to tell you that I love these Itemizer® drawer units.

Photograph 6, is the only cabinets I chose with doors on them which are



5. Itemizer® drawer partitions.

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6. Lockable cabinets.



7. Many of my favorite products.



8. 4-drawer unit locking bar.

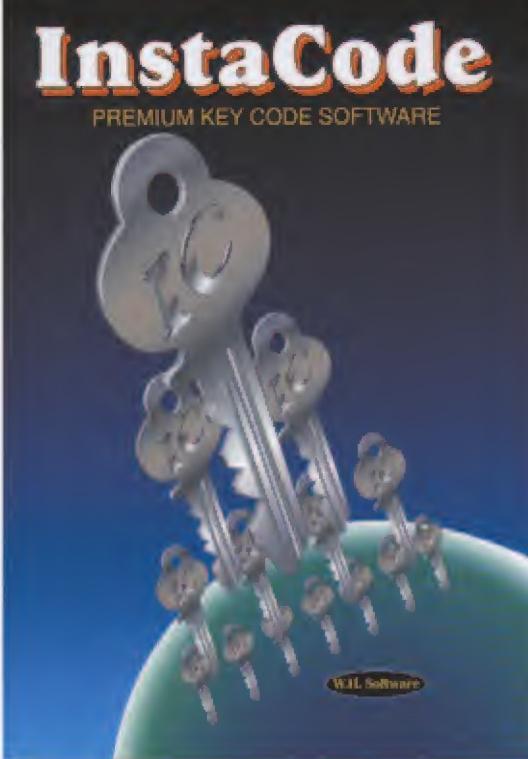


9. Floor level storage.

lockable. As you can see they are stacked over 4 drawer units and when the doors are open I can stack a lot of my favorite products in there. (See photograph 7.)

The 4 drawer units all have dividers and a sound dampening material in the bottom. The sound dampening material is an option. Each set of drawers also has a positive locking bar, which keeps the drawer from flying open when I turn a corner. (See photograph 8.)

There is more uncovered storage area at floor level which is where the fan and intake for my A/C unit is also located. (See photograph 9.) Although I can't place a great deal of equipment or inventory in this area, I can place some tools, a die-grinder, an emergency road kit, my six pound "fitting" hammer and some odds and ends.



#IC - 2001

InstaCode

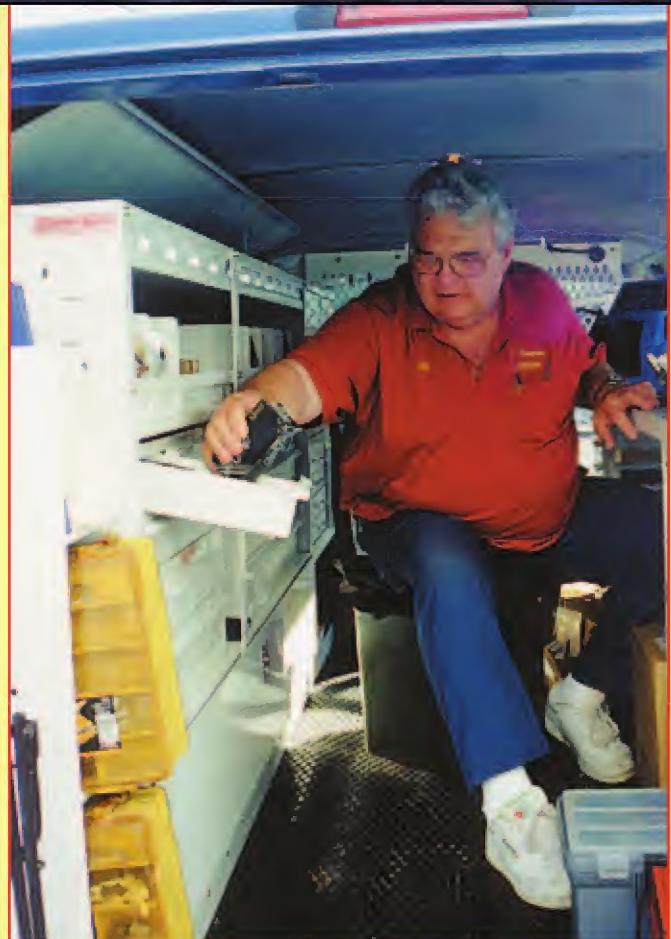
Your total code and code machine management program.



CLICK HERE TO LEARN MORE



10. A wall of storage compartments.



11. Almost everything is within arms length.



12. Large bins with adjustable partitions.



13. Parts cabinets.

This package has turned my van into an organized storage and work unit, with more cubbyholes than a fellow can find in a honeycomb.

Photograph 10, is a shot of the almost floor-to-ceiling storage units that run along the driver's side of the van. With all the nooks, crannies, cupboards, shelves, racks, dividers, cubbyholes and bins that are in this unit, I can carry and access a bundle of stuff. The nice thing is I can

access most of it right from my stool in front of my workbench. (*See photograph 11.*)

On top of the wall of storage units is a 69" shelf with a work cover, which has slots for dividers every inch or so allowing me to make the storage bins whatever size I want. I find this unit is a great place for latches, cylinders, spindles and all those miscellaneous parts I used to put in boxes and then could never find when I needed them.

Under that shelf is another full-length shelf with adjustable dividers that allow me to section off various sized compartments that hold pinning kits, assorted hardware, spray cans of paint or lubricant, various tools, and equipment. (*See photograph 12.*)

Photograph 13, shows part drawer bins that have slide out plastic trays. I have found these to be a great place to keep my key inventory. I have some drawers set up for bulk keys and



14. Floor level storage compartment with locking door.



15. Catalog file unit.



16. The primary work space.



17. 3-drawer jumbo unit
with 4-drawer unit on top.

others set up to hold boxes of individual numbers.

The drawers have to first be lifted to be pulled out and they have a built-in stop to keep them from sliding out and spilling their contents on the floor.

Photograph 14, is the tool compartment next to the floor with a lockable door on it. There is enough room here for me to put a variety of merchandise or oddball tools that will not fit anywhere else.

Photograph 15, shows a three-tiered catalog file unit where I can store tech manuals, code books or copies of *The National Locksmith*. The shelves are sloped inward to keep the books from sliding out while I'm going down the road.

Photograph 16, is a view of my customized six-foot long workbench. This consists of a three drawer jumbo unit and a four drawer unit on each side of the wheel well (*see photograph 17*) along with the customized counter top that I ordered. Each drawer also has a sound dampening material in the bottom.

In *photograph 18*, is the literature

18. Literature holder.



rack on the wheel well side of one of the workbench pedestals. It easily holds three notebooks which contains information I need on a daily basis about the keying systems and product preferences of my customers. On the facing pedestal (not shown) are two single literature racks, which serve to hold various publications that I carry.

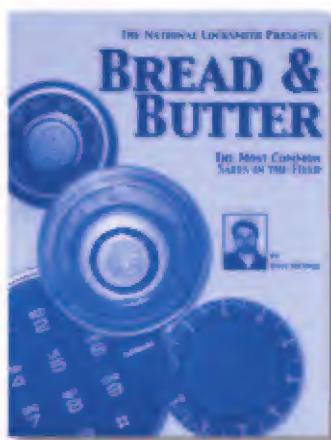
Photograph 19, is my re-pinning drawer, basic tool drawer and a "junk" drawer. These drawers are my main source for tools, springs, pinning

blocks, etc. If I need a key blank, I simply turn on my stool, open the appropriate drawer select the blank and cut it.

Photograph 20, is an overall shot through the back door of my van.

I'm truly packed and rarin' to go with room to spare for future inventory expansion. I do, however, have a lingering regret about the interior that WEATHER GUARD® and Fontaine Truck equipment helped design and install, I only wish

Bread & Butter



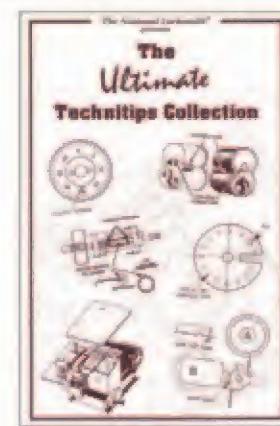
Now here is
one amazing
value!

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#BB - 01



The Ultimate Technitips Collection



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#TIPS - 2

Here's one
of the most
useful books
ever available
to the
locksmith!





19. My re-pinning drawer.

I had realized years ago what a tremendous difference a professionally designed, laid out and installed work interior would have made in easing my work load. If I had any inkling that it could have been this much better, I would have had one installed years ago in the old Green Lizard (my old, cold, cold natured Dodge van).

If I had installed a similar interior in the old Green Lizard I could have

transferred the older units to my new van and just "fleshed" out the rest. In my opinion, WEATHER GUARD's products are built to last, and last, and.... well you get the idea. Now you know why I am one very pleased locksmith.

For more information about WEATHER GUARD® products call: (1-800-456-7865) for the name and number of an authorized WEATHER GUARD® dealer near you. Or you can



20. Overall shot of the WEATHER GUARD® interior.

call Fontaine Truck Equipment at: 1-800-824-3033 for their nearest location. Fontaine is a stocking WEATHER GUARD® dealer and for my money, really great people to deal with. Tell 'em: "Jake told me to call!"

See y'all next month! Let's see; now where did I store that latchbolt?

Circle #289 on the Rapid Reply Card.

TNL

The National Locksmith

Guide To:



INTERCHANGEABLE CORE CYLINDERS

textbook

With step-by-step instructions
by Dan O'Shant

Interchangeable Core Cyliners

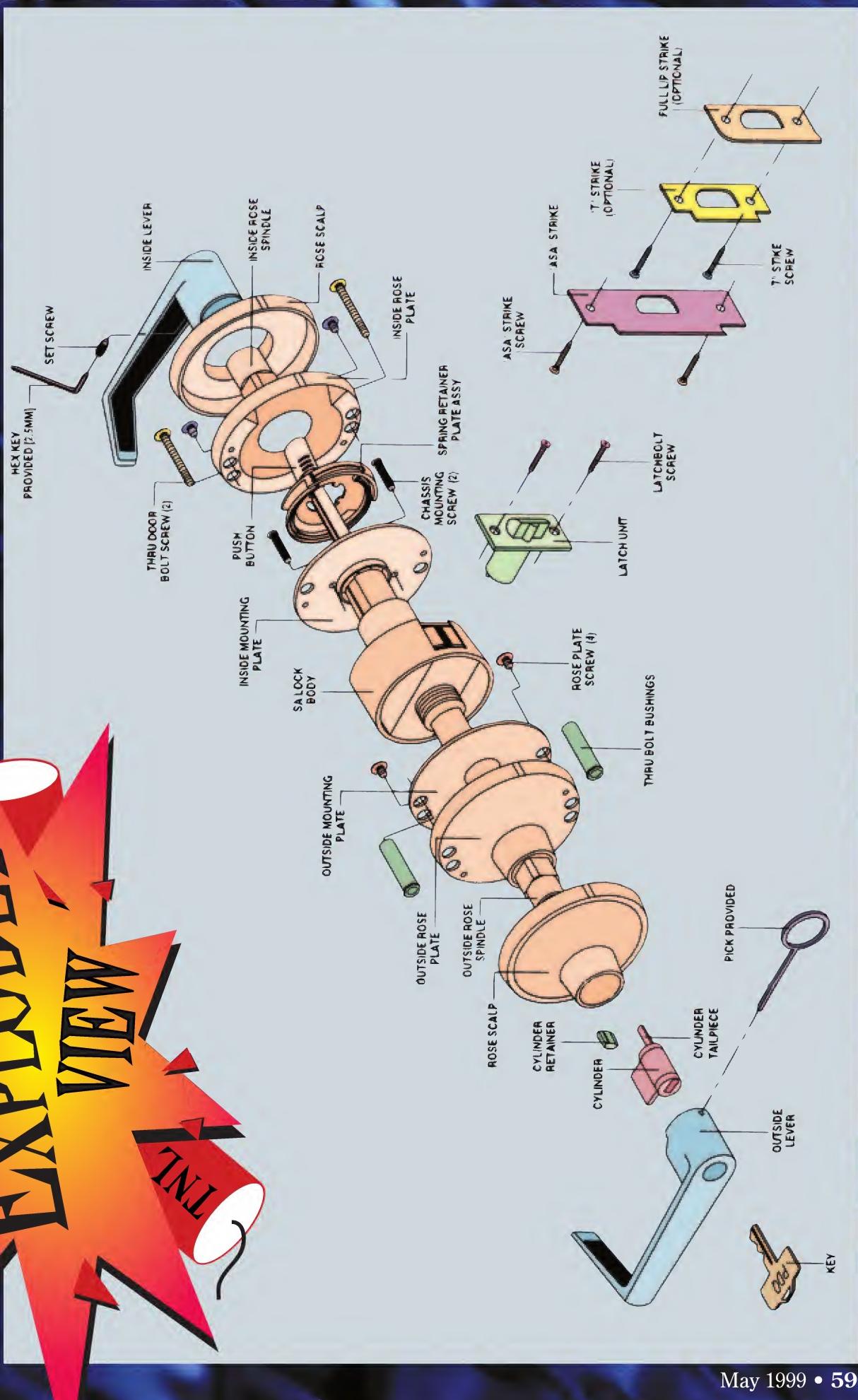
Covers all this...

- Best/Falcon/Arrow/Eagle/(A2)
- Best A3
- Best A4
- Corbin X Removable Core
- Corbin Z Removable Core
- Russwin Removable Core
- Emhart System 70 Removable Core
- Sargent Removable Core
- Schlage, Yale, Lockwood
- Medeco Removable Core

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#ICB - 1



SA SERIES SPIRIT GRADE 2 STANDARD DUTY

SPECIFICATIONS



| | |
|--------------------------|--|
| For doors: | 1-3/8" to 1-3/4" thick standard. Factory adjusted for 1-3/4" |
| Door Preparation: | Fits standard 161 door prep - Thru-bolting standard |
| Backset: | 2-3/4" and 2-3/8" |
| Case: | Heavy gauge cold rolled steel mechanism. Yellow chromate plate |
| Front: | 2-1/4" x 1-1/8". Beveled 1/8" on 2". Stainless steel, wrought brass or wrought bronze |
| Strike: | Stainless Steel, wrought brass, or wrought bronze. 4-7/8" x 1-1/4" (ASA) standard, "T" strike and Full Lip strike available |
| Rose: | 3-11/12" diameter |
| Latchbolt: | 1/2" throw. Adjustable front for beveled doors 1/8" on 2". U.L. Listed |
| Hand: | Non-handed |
| Trim: | 5-1/8" levers are zinc diecast with plastic insert. Wrought brass roses. Concealed screws |
| Keys: | Two (2) per lock |
| Keyways: | Keyed functions furnished standard in SCC |
| Cylinder: | 6 pin cylinder, keyed to 5 pin |
| Keying: | Can be MK, CMK, GMK. Available zero bitted (KO), Keyed Different (KD), Keyed Alike (KA). Can be keyed into existing masterkey systems of other manufacturers |
| Finishes: | US3 (605), US10B (613), US26D (626) |
| Certifications: | • Complies with ANSI A156.1, Series 4000, Grade 2 • Meets all accessibility requirements of the Americans with Disabilities Act (ADA) • U.L. Listed |
| Warranty: | One year limited warranty |

SUGGESTED ARCHITECTURAL SPECIFICATION

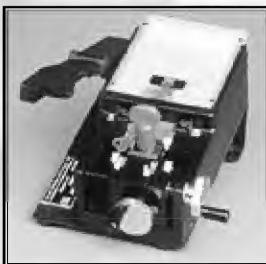
Lockset will be SA-PHL from PDQ Manufacturing, Leola, PA. Made in America with one year manufacturer's warranty. Philadelphia style levers with plastic inserts to be 5-1/8" in overall length with supportive spring power independent of chassis or latch unit. Positive lever stop to be independent of chassis or latch mechanism. Lockset fasteners to be concealed, utilizing through chassis thru-bolting and through the door thru-bolts secured outside the 2-1/8" door prep. ANSI Grade 2, U.L. Listed.

TECHNITIPS

YEAR-END PRIZES



Grand Prize
Silca Bravo Duplicator



1st Prize
HPC's 1200PCH
Punch Machine



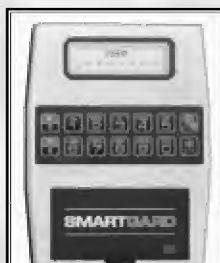
2nd Prize
Mas Hamilton's Auditcon
2100 & Certification Class



3rd Prize
Curtis 2100 Duplicator



4th Prize
SDC Magnetic Lock, Keypad
and Exit Switch



5th Prize
LaGard "Smart
Guard"®



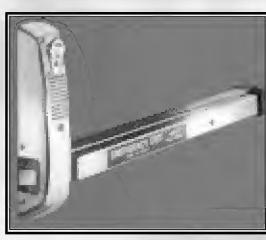
6th Prize
\$500 in All Lock Products



7th Prize
\$500 in ASP
Auto Locks



8th Prize
\$500 in Strattec Auto
Products



9th Prize
Arrow Exit Device and
Mounting Kit



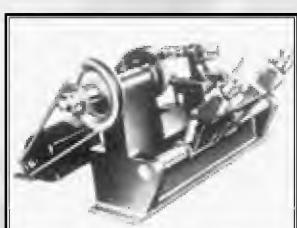
10th Prize
DeWalt Cordless Drill



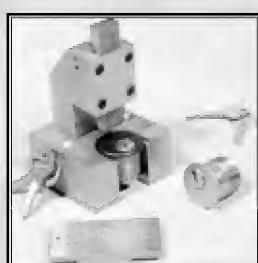
11th Prize
Detex ECL-8010W
Wetlock®



12th Prize
Securitron DK-26 Touchpad
and CPU Board for
Magnetic Lock



13th Prize
Foley-Belsaw 200
Key Machine



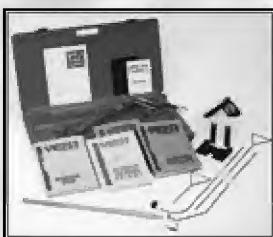
14th Prize
Accu-Mark™ Key
Stamping Machine



15th Prize
S&G 6120
Electronic Safe Lock

These Prizes Awarded Each Month!

- All Lock Ford or GM Kwikit
- Aero Lock Tryout Key Set
- Strattec Racing Jacket
- HPC Air Wedge™
- Sargent And Greenleaf 4400 Series Safe Deposit Box Lock
- A-1 Security Products
- ILCO Key Blanks (100 Blanks)
- Keedex "SPIN OUT" Screwdriver
- Tech Train Training Video
- Sieveking Products Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard



16th Prize

High Tech Tools
2500 Pro Set



17th Prize

Slide Lock's
Master "Z" Tool Set



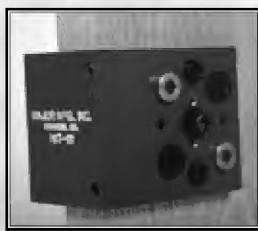
18th Prize

ESP Products Sampler



19th Prize

Baxter JV-1 and
JV-5 Code Books



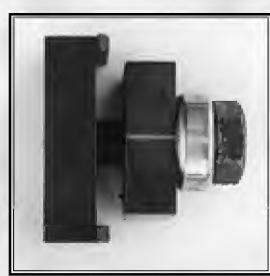
20th Prize

Major Manufacturing's
HIT-111 Drill Guide



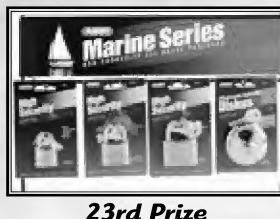
21st Prize

Falle Pick Set From Mark
Bates Associates



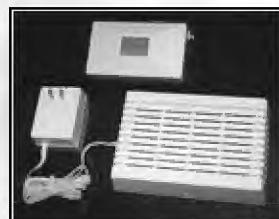
22nd Prize

Sieveking Products
Squeeze Play



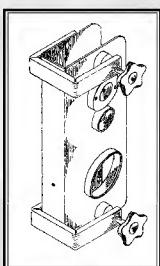
23rd Prize

ABUS Padlock's Marine
Padlock Display



24th Prize

Rodan's AV 100 Heavy
Duty Door Annunciator



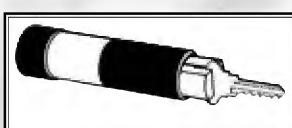
25th Prize

A-1 J-50
Installation Jig



26th Prize

M.A.G. Engineering
Sampler



27th Prize

Framon Impressioning
Handle

Send in your tips, and win!

How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,
The National Locksmith
1533 Burgundy Parkway, Streamwood,
IL 60107-1861

Or send your tips via
E-mail to: Natlock@aol.com

Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.

Tips
Start
on Next
Page!

**The 15
Minute
Safe
Opening
Technique**

28th Prize
Book – 15 Minute
Safe Opening
Technique by Jake
Jakubowski



**BWD PRIZE WINNER:
GM Savanna
Retainer Location**

I recently made keys for a 1998 GMC Savanna Van. The vehicle uses the typical 10-cut GM doors locks and ignition. The doors shave five cuts (spaces 6-10) and the ignition nine cuts (spaces 1-9.) I could not get a code from GM, so I used an alternative method.

Remove the lower shroud and then separate the two halves of the shroud. The bottom half has hooks on the back and must be slid back before it can be removed from the upper half.

Loosen the two Torx bolts that hold the upper half of the shroud to gain clearance to the locking sidebar, which is at about the 7-o'clock position. I had the lock picked in about 5 minutes, but I could not find the active retainer to depress with my A-1 picking tool.

I remove the ignition lock ears with two screwdrivers and I could then see the retainer clearly. It was on the opposite side of the plug from the others I have done, and the tool was not long enough to reach the retainer. It would have needed to be about a 1/2 in. longer.

You could not even come from the backside of the plug because the tool was not shaped to get it from that side. Once I removed the ears from the lock I could reach the retainer with a dental pick or similar tool.

Just remember the ignition lock needs to be in the "On" position to remove, read the code, cut a key and replace.

Ben Freiberger
Nevada

**AERO LOCK PRIZE
WINNER:
Decoding the Code**

I had a customer who lost his keys to a 1988 Nissan pick-up. Following the AutoSmart book's recommendations for servicing, I pulled the passenger side door panel to get the code number. On the tailpiece were the numbers 77970. I tried to find the cuts for that code to no avail. I then pulled the drivers side door lock thinking a code would be there, but there was nothing on it at all.

Returning to the AutoSmart book I looked for a number that would come close to matching this 77970. I found codes for X-1 through X8000. I then dropped the first 7 and inserted an X, which gave me X7970. I cut the key

64 • The National Locksmith

Jake's Tip of the Month...

Keyless American Padlocks Entry

We've all read - or maybe even tried - to defeat an American padlock by drilling out the hardened steel retainer, removing the cylinder and using a screwdriver to release the shackle. When the padlock is on a gate, chain or hasp, that can make for some rather tricky drilling.



**by Jake
Jakubowski**

If you encounter a situation where the original biting does not need to be retained or decoded, drill a 3/16" or a 1/4" hole as close to the top of the keyway as possible. Make sure to drill all the chambers. Tap the side of the lock to knock loose the pins and springs and with a screwdriver turn the plug. After opening and disassembly insert a new plug keyed to your customer's preference and you're done.

This is a 30-second procedure from start to finish and you don't need to worry about having carbide drill bits to drill out the hardened steel retainer.

according to that code and it worked.

*Glen Hutchinson
Texas*



**STRATTEC PRIZE
WINNER:
Easy Padlock Plug
Pulling**

Here's a tip for opening padlocks with a removable cylinder or core. The particular padlocks I had to open were an ASSA class 3 padlock and a Federal 650. Both of these padlocks had a removable cylinder/core and the ASSA padlock featured a 6000 twin cylinder with a sidebar. The Federal padlock had an EVVA cylinder, which is Austrian. It features a very intricate keyway that makes it very difficult to pick or impression.

I discovered that on the soft body padlocks (those made of brass) you can drill through the face of the padlock quite easily and cut the retaining screw that holds the body of the cylinder into the padlock.

Measuring where to drill is fairly basic; all you need to do is measure the depth of the cylinder chamber by inserting the pick in the keyhole until you reach the end of the plug. Add a quarter of an inch or so and drill directly in line with the shackle. (See illustration 1).

Drill through the face of the padlock cutting the screw holding the cylinder.

Now you can open the padlock,

and in my case, with the ASSA padlock, I needed to save the combination of the cylinder so that we could generate a key to open more locks that were on site.

I would suggest that if you try this same method on the better grade padlocks with a hardened body, you would just need to use a tungsten bit. It is much easier to use this method as opposed to drilling the sheer line of the cylinder, which could incorporate hardened pins, and make the job quite difficult.

*Gary Watt
England*

**HPC PRIZE WINNER:
Picking It To Locked**

I recently tried to pick a deadbolt in the open direction with little success. After trying for about five minutes or more, I decided to pick it to the locked position and with one rake, it was picked. I could hardly believe it. I used a plug spinner to turn it to the unlocked position and it only turned a SHORT distance, but it was picked! I used a small screwdriver to finish the turn and opened the door.

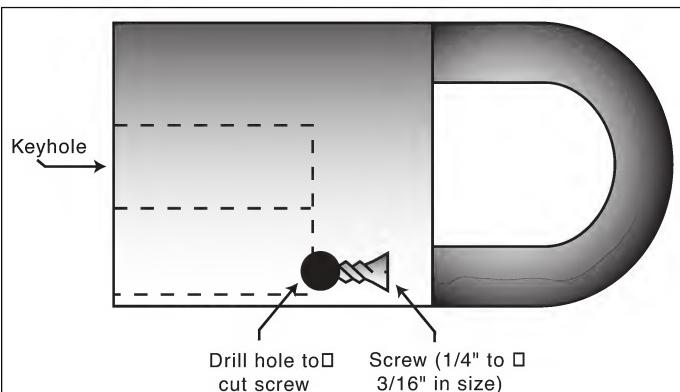


Illustration 1.

Later as I thought about it, I had probably picked it in the proper direction several times, but the bolt was bound and prevented it from turning. Never again will I pick a deadbolt in the direction that would retract the bolt. I will pick it in the opposite direction (where it moves freely) and use the plug spinner to reverse it.

James L. Hall
South Carolina



SARGENT &
GREENLEAF PRIZE
WINNER:
**Sears/Tower Fire
Safe Opening**

A customer of mine had a Sears/Tower safe, which had not been opened in 15-years, but now he needed insurance papers out of it. I had never seen one of these, but it resembled a Herring-Hall-Marvin that I had to change the combo on years ago.

I tried to manipulate the lock open, but it was very tight and my attempt was unsuccessful.

Knowing that the dial was most likely pinned to the spindle, I drilled a hole through the dial ring at five o'clock. It was easy to penetrate because there was no hardplate. I used a penlight to look in the hole while dialing and was surprised that the lock featured a rear driver. I wrote down the numbers where the gates showed in my drilled hole and transferred them to about 95. The unit opened on the first try.

I now take pictures of all of my openings. I should have started doing it fifty years ago. It really is a valuable tool.

Michael E. Shearer, CRL
Illinois



A-1 SECURITY
PRODUCTS PRIZE
WINNER:
Kwikset Tip

Here is a tip that is so simple, yet I have never seen anybody mention it.

When rekeying Kwikset key-in-knob locksets, you have to remove the lock from the door to remove the cylinder. I carry my Kwikset cylinder removal tool with me and pop the cylinder out and then replace the lockset on the door. The customer now has a knob to use to enter or exit the door if he so desires.

Richard Posner
Florida

Editor's Note: Richard, your tip is valid, but if you carry A-1's Cylinder Removal Tool, you don't have to remove the lock from the door. Just insert the tool turn the

handle and the cylinder will pop right out. Also, I carry a dozen or so Kwikset cylinders already keyed up. That proves to be a real time saver.



ILCO UNICAN PRIZE
WINNER:
**Quick Hinge
Conversion**

I had a situation where some thugs had entered a customers business by knocking the pins out of the back door hinges and prying the door away from the jamb on the hinge side. The customer wanted the door fixed ASAP, but I didn't have any non-removable pin hinges in stock.

As a substitute I opened the door and used my trusty DeWalt cordless drill to drill a small hole through one knuckle of each hinge and inserted a roll pin, which was then ground off smooth. That secured the customer's door and would prevent a future thief from taking the hinge pins out.

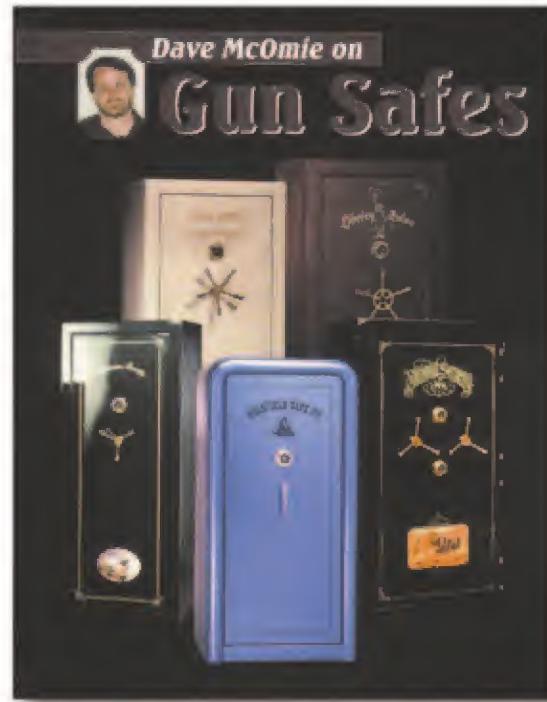
Jay Christie
North Carolina



KEEDEX PRIZE WINNER:
**Simplex "C" Clip
Substitute**

While recovering a lost combination the other day on a Simplex 1000, I

Gun Safes



Need a drill point or relocker drill point
on a gun safe?

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#GS - 1



managed to drop that little tiny C-clip that goes on the unlocking slide stud. I searched high and low to no avail.

Finally I called Simplex and in talking to the technician discovered that the C-clip (same size) that is on the front of the unit (button side) is "non-essential" and can be removed and used on the unlocking slide. I moved it and solved my problem, but not before moving the whole assembly into a large plastic tray. So the next time you lose one of those pesky little slide clips, just "borrow" the one off the front.

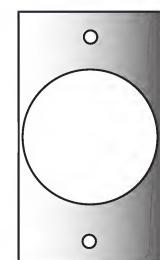
Chuck Donnelly, CRL
New York



TECH-TRAIN PRIZE WINNER:
Shimming A Too Deep Mortise

Here's how I use the faceplate of a Kwikset adjustable deadlatch as a shim for repairing a latch area that has been mortised too deep.

When a homeowner or commercial customer calls and says they just can't seem to get his new lock to latch properly, it is often because they bought a 2-3/8" backset lock when they needed a 2-3/4". They then they tried to deepen the latch mortise to "fix" the problem.



Adj. deadlatch □
rectangular □
face only

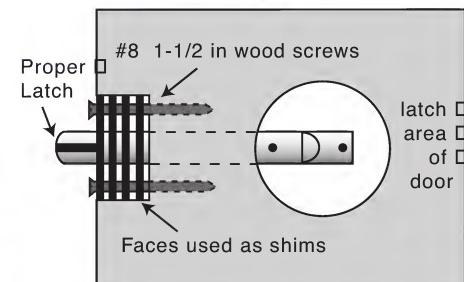


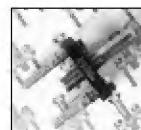
Illustration 2.

I have run into this problem frequently and have tried shims of washers, cardboard and other materials to fix the problem. However, I recently found a great, and much sturdier solution.

I keep several Kwikset adjustable deadlatches (part #2955) on my truck and when I encounter this problem I simply use the rectangular faceplate as a shim. (See illustration 2.) I have used as few as one and as many as four to correct specific latch mortise problems.

The hole in this faceplate will fit around most standard latch bodies that you encounter. All you need do is sell the customer a new latch, shim it out and attach with #8x1-1/2" screws.

Vernon P. Kelly, CRL
New Jersey



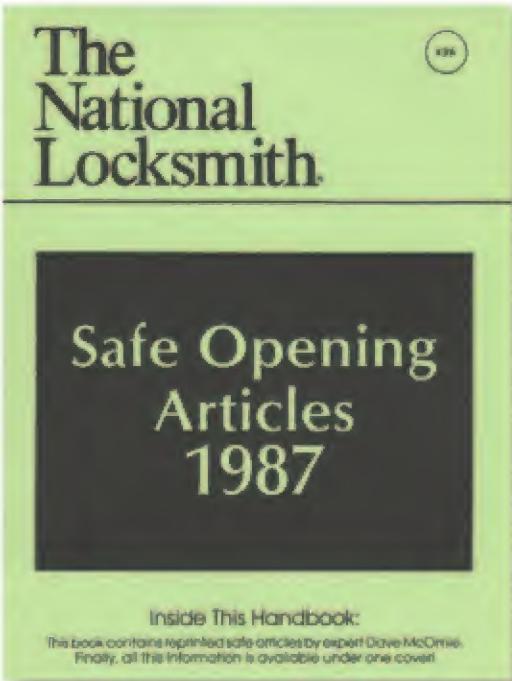
SIEVEKING PRODUCTS PRIZE WINNER:
Car Opening Wedge

This is a quick and handy tool for wedging on automotive doors. The tool is made from aluminum bar stock to prevent scratching the glass. For ease of entry, the aluminum should be no more than 3/16" thick, and for spreading, never over 5/8" wide.

Bend the tool as shown in illustration 3, using a vise and mallet.

The tip is tapered to a knife edge (not cutting sharp) with a long taper on the tip towards the door handle side to make insertion between the window and weather-stripping easy. Round over all edges on the full length of the tip so when the tool is turned, it

Safe Opening Articles 1987



Now under one cover—all the information safe opening articles by expert safeman, Dave McOmie.

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#SA - 1



won't damage the weather-stripping and it rolls easier on the glass. Round off the handle edges for a smooth comfortable feel.

To use: insert the tool between the window and weather-stripping where you want to wedge the opening. Some are very tight and you have to insert the tip at the rear of the door and slide it to where you want the opening. Push the tip down and turn the tool 90 degrees until the handle rests against the window. It will lock in place and allow you to use your opening tool.

I have made several of these for my toolbox and prefer them to any wedges I have found. Very durable, light and won't rust.

Roger Peck
Maryland

Major
MANUFACTURING, INC.

MAJOR MFG.
PRODUCTS PRIZE
WINNER:

Panic Device Function Change

A customer of mine had a door with a Yale panic exit device and

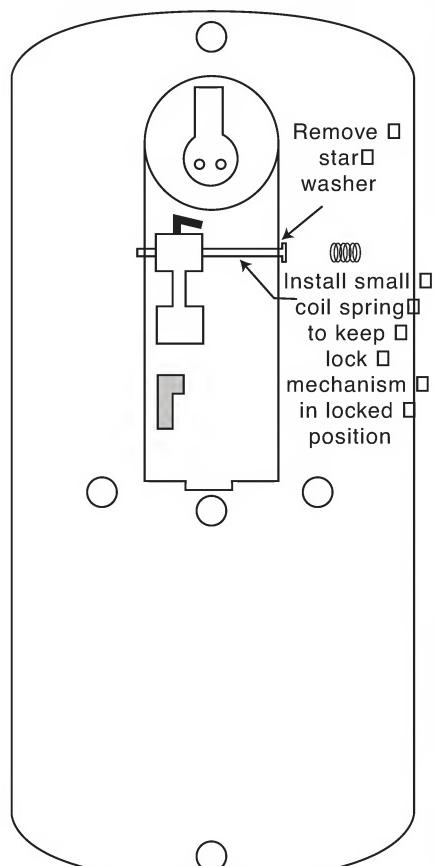


Illustration 4.

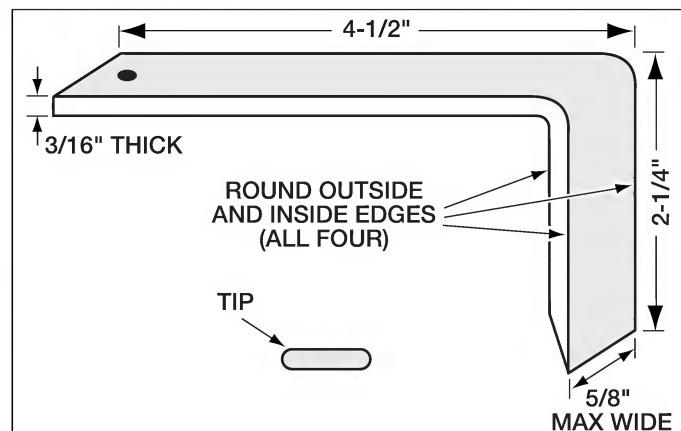


Illustration 3.

wanted to change the function from an entry function to a storeroom function.

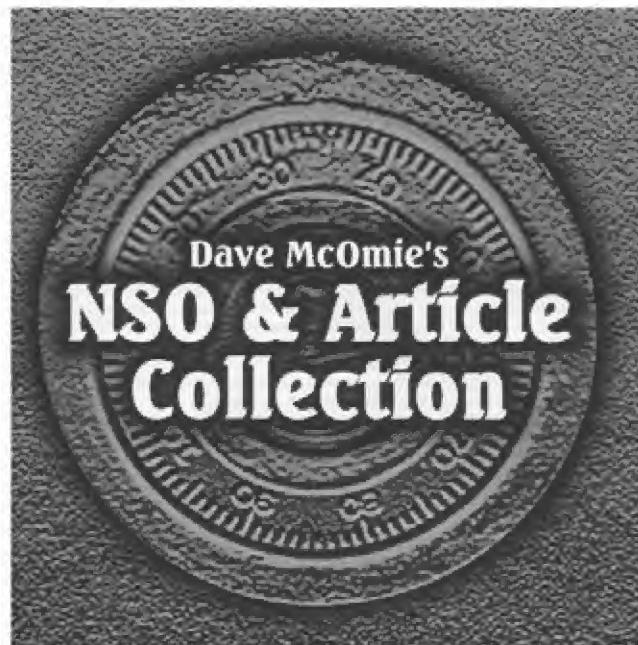
Illustration 4., shows how I accomplished that by making a slight change to the outside trim and inserting a small coil spring which kept the locking mechanism in the locked position, thereby requiring a key to open the door.

*Austin Hardwick
West Virginia*

**SLIDE LOCK PRIZE
WINNER:
Tip For the New Guys**

The other night I received a call from a

Dave McOmie NSO & Article Collection on CD



This CD contains every NSO newsletter and McOmie File Dave has ever published.

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#DMCD - 2

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panicked lady who said she could not find the keys to her 1991 Chevy truck. After arriving at the site, I called GM with the VIN number and received the codes with a return phone call. I looked up the code, cut the key and of course, it didn't work.

After removing the steering wheel and ignition, I saw that there was no code on the ignition. I asked if the ignition had ever been changed and she said her husband had it changed because it was not working properly. I put a new ignition in the column and sent the lady on her way.

What's the point? Don't trust codes that you get from any source without asking the customer if the locks have been changed in the car.

George Steiner
Nevada



**SIEVEKING KEY GUIDE
PRIZE WINNER:
By The Numbers**

Whenever I install a safe lock, I try to make it as easy as possible for the customer to remember the combination. However, I do suggest that if they feel compelled to write it down, it should

be written in such a way that only they would know it is the combo to their safe.

For example: If the new combination is 71-27-43. We suggest that the customer make an entry in their address book as follows: "John Williams" 718-555-2743. By utilizing a bogus area code, the six number combination to the safe can be hidden in the ten number telephone sequence.

We caution the customer not to write the number down as a separate number and never in red. The extra efforts of helping the customer secure their safe combination goes a long way in the good will department.

Carl J. Bourdette
New York



**JET HARDWARE
PRIZE WINNER:
Briefcase Opening**

Having recently ordered an aluminum briefcase from a mail-order catalog, I decided just for the fun of it to see if I could open the combination locks without knowing the combination. I found that a short piece of .010 gauge spring steel makes a

problem.

The 98/99 series has a push pad damping device incorporated in the unit that is designed to decelerate the push pads return. I have found that removing the damping device will allow the latch to fully extend every time and no damage is done to the exit device.

Remove the exit device from door and you can see how the latch head is held onto the body either by two screws or push-in tabs. Remove the screws or loosen the tabs and slide the latch head out of the body. Next lift the touch bar up and to the right. You can now see the damping device. Just lift the two tabs to remove damper and the exit device will now work like a dream. The procedure is not as complicated as it sounds.

Gary Davis
Virginia

Editors Note: Gary, although your tip will solve the problem you outline, the root cause of the problem is dirt, crime and corrosion building in the mechanism. To maintain the OEM specs it might be better to disassemble the device and give it a thorough and lubrication.



**HIGH TECH
TOOLS PRIZE
WINNER:
Custom Car Opening Tools**

On many occasions I have needed a car-opening tool that either wasn't available quickly enough to help me, or it just wasn't produced commercially yet. In order to make my own tools in this situation, I purchase music wire in the appropriate diameter from a hobby shop and proceed as follows:

Measure the wire and plan the bends required. Heat the wire with a propane torch until red-hot and slowly bend until desired shape is obtained. Quickly immerse hot section in clean oil to cool. Heat bent area just until metal is blue, then withdraw heat and allow to cool slowly. Repeat this process for each bend, and then clean tool with steel wool until smooth.

Terry Heinrichs, CRL
Alaska



Transponders

The National Locksmith's®
Guide to
Transponders...
by Michael Myrick



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#TS - 2001

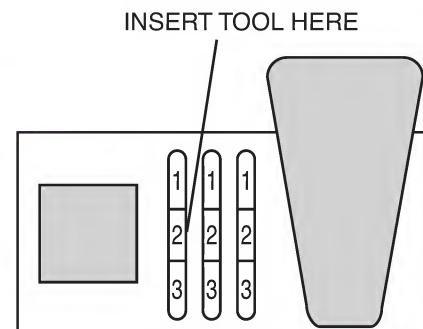


Illustration 5.

nice tool for determining the combo.

Insert the wire dead center on the right side of each wheel and begin turning the wheel. (*See illustration 5*). When you feel the tool drop about a sixteenth of an inch, record the number. After you decode each wheel, the lock will open. *Gary Milligan*

Missouri



**LA GARD PRIZE
WINNER:
Von Duprin Latch Fix**

Occasionally, when servicing the Von Duprin 98/99 series exit devices you will find that the latch will not fully extend or is too slow extending. In either event it can cause a security

Chicago Lock Concentrates On Locksmith Sales

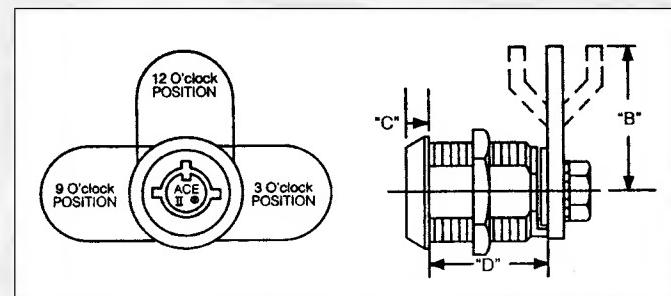
by Jim Carver

Introducing new products which concentrate on locksmith sales and service.

As part of a continued commitment to the locksmith market, Chicago Lock Company has introduced two locksmith oriented products. One will help increase retail sales of the Universal Function Acell® Camlock, the other will add to the locksmith's efficiency on the job.

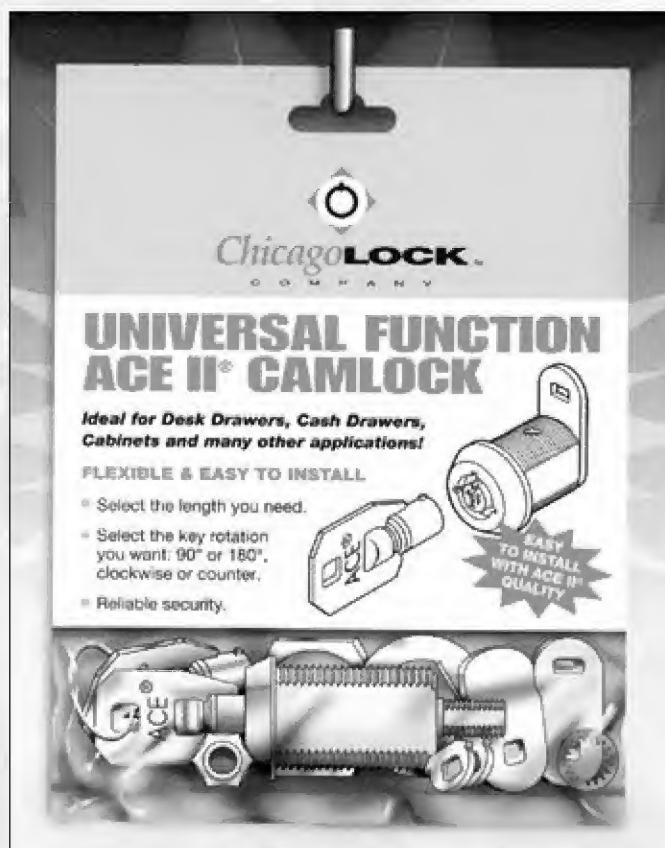
The new retail display of Universal Function Acell® Camlocks is ready for easy display in the locksmith's store or shop and includes easy-to-follow instructions for customer replacement lock needs. (See photograph 1.) These are original factory quality locks and consist of all brass construction with the patented Acell® assembly. The center plug contains an anti-drill pin for added security. The standard finish is polished nickel. The display is furnished

with straight locking cams, which can be mounted vertically or horizontally, and also 1/4-inch offset cams. Cams are 1/8-inch thick by 3/4-inch wide. Two keys are furnished per lock. (See illustration A.)

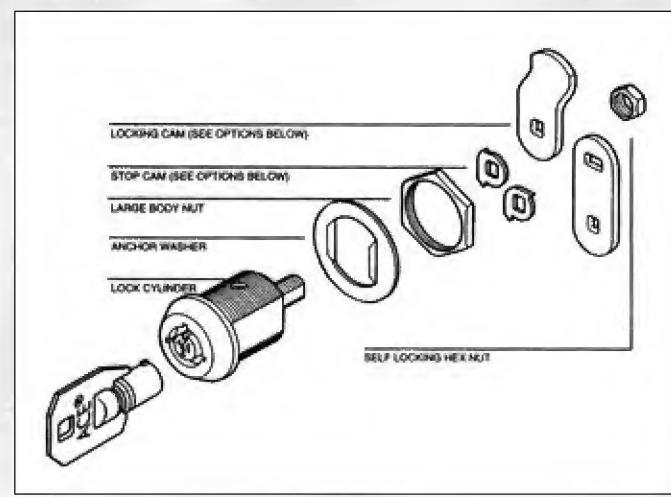


A. Locks are furnished with straight locking cams and also 1/4-inch offset cams.

These new packages include easy to follow instructions for the customers replacement lock needs. With the all-in-one package design, field installation of the lock is a breeze. The Universal Function package includes everything you need for quick, easy installation of these original factory-quality locks. (See illustration B.)



1. The new retail display of Universal Function Acell® Camlocks.



B. The Universal Function package includes everything you need.

Diary Of A Safeman

Diary Of A Safeman

The journal of safeman C.L. Corey with details of safe cracking in the 1930's. Relive the days of Al Capone.



With an introduction by
Dave McOmie

This book is a real gem...the
private safe diary of old time
safecracker C.L. Corey.

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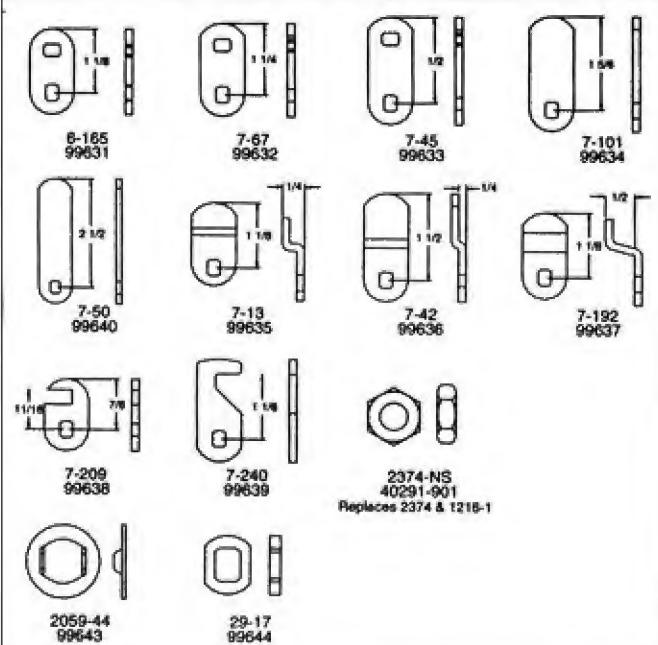
#DIARY

This display board will help the customer identify the security lock needed, which will reduce the locksmith's time in trying to determine the customer's need. Efficient use of time is always important in business.

Chicago Lock Company is also introducing the new ACE® Locking Cam Service Kit. (See photograph 2.) The kit contains ACE® factory original parts in one compact container. This will cut down on wasted trips back to the shop to find the right parts. Everything that's needed is right there. (See illustration C.) This should be a real time-saver for locksmiths.



2. Chicago Lock Company is also introducing the new ACE® Locking Cam Service Kit.



C. Everything that's needed for lock installation is right there.

Chicago Lock Company intends to keep working on products and services that will help the locksmith do his job more profitably and efficiently.

*For more information call: 800-445-3204, fax: 414-947-7178,
e-mail: acelock@cris.com, or circle 288 on rapid reply.* **TNL**

BEGINNER'S CORNER

Corbin-Russwin Interchangeable Cores.



by
**Jim
Langston**

Before you begin servicing the Corbin-Russwin Interchangeable Core (IC) locks, you need to know that pinning these cores is completely different than pinning Arrow, Falcon, Sargent or Best interchangeable core systems. Corbin-Russwin interchangeable core locks are available in a 6-pin configuration only. Servicing the Corbin-Russwin core



1. A Lab manufacturing pinning kit designed strictly for Corbin-Russwin interchangeable core locks.

requires no special tools. You will need a pin kit like the one I use from Lab Manufacturing. They offer a pinning kit that is designed strictly for Corbin-Russwin interchangeable core locks. (*See Photograph 1.*)

There are two types of Corbin interchangeable core designs, the old style (*see illustration A*) and the new style (*see illustration B*). Both use the small (.509) diameter plug. The only difference in the two is the core itself. Looking at the two cores, you can see that the sleeve in the old style is quite different than the new style. The old style sleeve is more difficult than the new style to service. The new design works much better and with less trouble.

These locks use a standard Control Key (CK) to remove the core from the lock housing. (*See illustration C.*) The Control Sleeve in this lock is operated by the second, third, fourth and fifth pin chambers. (*See illustration D.*)

To remove the core from the lock housing, turn the Control Key clockwise until it stops. This action will retract the control sleeve into the core allowing the core to be removed from the housing. (*See photograph 2.*)



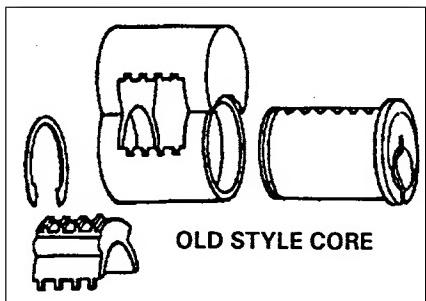
2. To remove the core from the lock housing, turn the Control Key clockwise until it stops and removed from the housing.



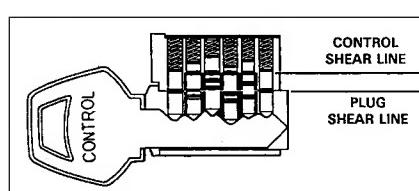
3. To rekey the core, first remove the spring cover.

When selecting pins for Corbin-Russwin interchangeable core locks, the method is completely different from other similar systems. Corbin-Russwin locks use what is known as plus (+) and minus (-) pins as Control pins. This requires us to think differently than we normally do when selecting Control pins for other types of cores. The pinning process is not a simple one, but can be mastered if you remember certain rules that apply.

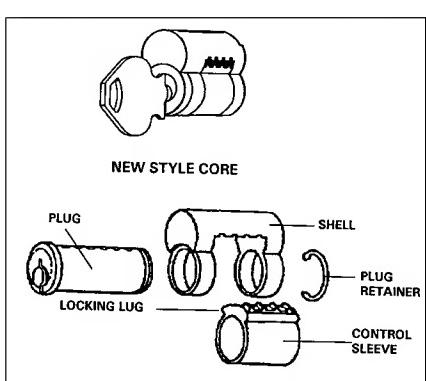
To rekey the core, first remove the spring cover as seen in *photograph 3.*, and remove all springs and pins from the core. Be absolutely certain all are removed. Do not disassemble the core by removing the plug retainer and dumping the pins. (*See illustration E.*) Doing so will allow the sleeve to separate from the shell. If it is a new



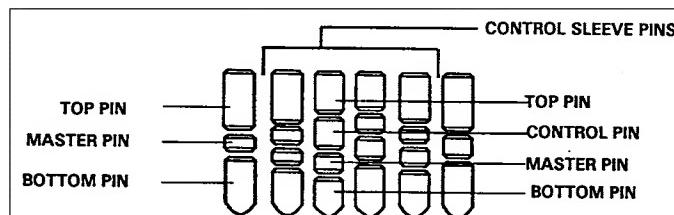
A. The old style Corbin-Russwin interchangeable core lock.



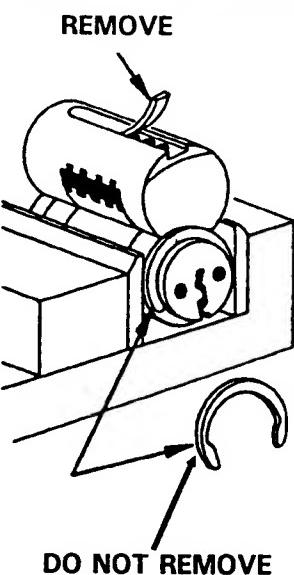
C. These locks use a standard Control Key (CK) to remove the core from the lock housing.



B. The new style Corbin-Russwin interchangeable core lock.



D. The Control Sleeve in this lock is operated by the second, third, fourth and fifth pin chambers.



E. Do not disassemble the core by removing the plug retainer.

| | 1 | 2 | 3 | 4 | 5 | 6 |
|--|------|------|------|------|------|------|
| A1 CONTROL KEY BITTING (1ST & 6TH ONLY) | 7 | | | | | 5 |
| A2 TOP MASTER KEY BITTING | 7 | 6 | 9 | 7 | 9 | 5 |
| A3 CHANGE KEY BITTING | 5 | 2 | 5 | 3 | 1 | 5 |
| A4 BOTTOM PINS | 5 | 2 | 5 | 3 | 1 | 5 |
| A5 MASTER PINS | 2 | 4 | 4 | 4 | 8 | - |
| A6 MASTER PINS | - | - | - | - | - | - |
| | | | | | | |
| B1 ADD A4 AND A5 (Bottom Pins & Master Pins) | 6 | 9 | 7 | 9 | | |
| B2 WRITE CONTROL KEY BITTING (2 thru 5 only) | 6 | 3 | 9 | 5 | | |
| B3 SUBTRACT smallest number from largest. | 0 | -6 | +2 | -4 | | |
| | | | | | | |
| C1 Write CONTROL KEY bitting (2 thru 5 only) | 6 | 3 | 9 | 5 | | |
| | | | | | | |
| D1 BOTTOM PINS (Write numbers from A4) | 5 | 2 | 5 | 3 | 1 | 5 |
| D2 MASTER PINS (Write numbers from A5) | 2 | 4 | 4 | 4 | 8 | - |
| D3 MASTER PINS (Write numbers from A6) | - | - | - | - | - | - |
| D4 CONTROL PINS (Write numbers from B3) | 0 | -6 | +2 | -4 | | |
| D5 TOP PINS (Write numbers from C1) | M | 6 | 3 | 9 | 5 | M |

NOTE: M = .247 TOP PIN Copyright © 1983 by G. L. Finch Revised 1988

F. Our pinning chart example from G.L. "Gerry" Finch Locksmith Publications.

style core it is not a big problem, although it does make it more difficult to reassemble. However, if it is an older style core, a problem reassembling the core can be encountered. The sleeve in the old style core is only a segment and it can be very difficult to align all the pin chambers when reassembling. Make your job easier and faster by removing only the spring cover and dumping the pins.

With the pin chambers empty, it is also not a bad idea to ream the

chambers in the core to insure there are no burrs to interfere with the proper raising and lowering of the pin stacks.

To aid in the keying process of the cylinder you can obtain either a pinning chart from Corbin-Russwin or create your own. Another good instruction/reference manual, which includes pinning charts, is available from Gerry Finch Locksmith Publications. (*See Illustration F*) I will use this chart as the pinning reference in the following procedures.

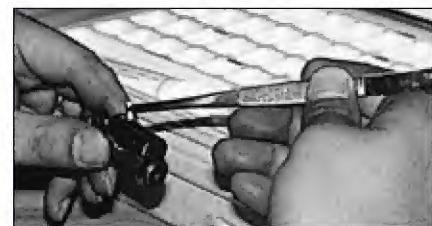
With the core in front of you, align the pin chambers in the plug, sleeve and shell. Once they are all aligned, insert a drill blank that will fit into the fifth chamber to retain the plug, sleeve and shell in alignment until pinning the first two chambers is completed.

Once the second chamber is pinned and all keys work you can remove the drill blank.

If you are new at rekeying interchangeable core locks, a good method of practice is to rekey one chamber at a time. (*See Photograph 4*) After inserting the proper bottom, master, control, and top pins in the chamber, top them with a spring, position your thumb over the chamber and try each key. In using this method you will eliminate unloading a core later when a particular key will not operate. There is nothing worse than repinning an entire lock, staking a spring cover and then

discovering that the key won't operate the lock. If all keys operate the core properly, pin the next chamber and again try each key. Do not remove the pins from the first chamber when rekeying the second chamber. Leave each pin stack in the core as you proceed.

After all pins have been loaded and checked, apply just a dab of dry Teflon powder lubricant to the top of each pin stack before capping the core. Do not use graphite. It cakes up and can cause cylinder operating problems.



4. A good method of practice is to rekey one chamber at a time.

Before we can select the pins to pin a core, we must understand the manner in which the keying systems for these cores are created. The following pertains to original Corbin keys only.

We must first start with a key bitting. If you have an original Corbin key it will be stamped with a bitting code on the bow of the key blank. This bitting is written in reverse. To use it rewrite it with the last number becoming the first number. For example, if 597967 is stamped on key bow, rewrite it as 769795. This is the actual key cuts in their proper sequence from bow to tip. Original Russwin keys are direct coded and can be read and pinned as stamped on the bow.

Generally, factory generated Master Key (MK) systems use the deepest bittings in the Top Master Key (TMK) or Grand Master Key (GMK). This however is not a hard and fast rule.

The bitting of the Control Key in the first and sixth chambers will generally be the same as the Top Master Key. If it is not, then an extra master pin will be used in those positions.

In *Illustration F* the TMK bitting on line (A2) is: 769795. The Control Key bitting on line (A1) is: 769795. The first and sixth chambers from the TMK will be constant between the TMK and Control key. The Change Key bitting on line (A3) is: 525315.

The key bittings will be as follows:

| | |
|-----------------|--------|
| Control Key: | 763955 |
| Top Master Key: | 769795 |
| Change Key: | 525315 |

We can now determine the bottom pin bittings, which will always be the shallowest bitting between the Top Master Key and the Change Key in each chamber. In our pinning chart example in *Illustration F*, the shallowest bitting between the TMK and Change Key bittings is the Change Key bittings. In this example the Change Key bittings are the

shallowest in all positions, however this is generally not the case.

From our example the bottom pin bittings on line (A4) would then be: 525315.

After selecting the bottom pins for each chamber we then proceed to select the Master pins. This is accomplished by adding enough to the bottom pin biting to create the difference between the bottom pin biting and the deepest biting or highest biting number in that chamber.

For example, in chamber one, the bottom pin biting is (5) and the deepest biting is the TMK biting of (7). Subtract (7) from (5) and (2) would be the Master pin biting in chamber one.

The same procedure is used in the remaining chambers to determine the Master pin bittings on line (A5), which would be: 24448-. In chamber six no Master pin is needed so we make a dash (-) in that box. Never write a zero (0) when no Master pin is needed. I have seen individuals waste precious time looking for a zero Master pin when there is none. There is, however, a zero pin in this system. It is used as a Control pin.

You will notice that there is another row for the listing of additional Master pins (A6) at the bottom of the chart. This is not required in this particular system. There may be times when the designer of a Master key system desires the Control Key biting in the first and sixth chambers to be a totally different biting from the Top Master Key in the corresponding chambers. It will be a time like this when an additional Master pin will be used in the first and sixth chambers and additional biting information would be needed on line (A6).

At this point our bitting chart is: (See illustration G.)

| | | |
|-------------------------|--------|---|
| Control Key Bitting: | 7--- | 5 |
| Top Master Key Bitting: | 769795 | |
| Change Key Bitting: | 525315 | |
| Bottom Pins: | 525315 | |
| Master Pins: | 24448- | |
| Master Pins: | ----- | |

The Control Key bittings in chambers two, three, four and five are

blacked out at this point because they are not factored into the equation yet.

After the Control Key bittings, Top Master Key bittings, Change Key bittings, bottom pins and Master pins have been determined, we can then factor in the Control Key bittings. To do so, add the bottom pins (line A4) and Master pins (line A5) together in

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| A1 CONTROL KEY BITTING (1ST & 6TH ONLY) | 7 | | | | | 5 |
| A2 TOP MASTER KEY BITTING | 7 | 6 | 9 | 7 | 9 | 5 |
| A3 CHANGE KEY BITTING | 5 | 2 | 5 | 3 | 1 | 5 |
| A4 BOTTOM PINS | 5 | 2 | 5 | 3 | 1 | 5 |
| A5 MASTER PINS | 2 | 4 | 4 | 4 | 8 | - |
| A6 MASTER PINS | - | - | - | - | - | - |

G. Bitting chart.

chambers two, three, four and five which will be: 6979 on line (B1). Next write the known Control Key bittings on line (B2) from the same chambers next: 6395.

Finally subtract the difference between the bittings in each chamber.

If the Control Key biting on line (B2) is smaller than The bottom pin and Master pin bittings on line (B1)

| | | | | |
|--|---|----|----|----|
| B1 ADD A4 AND A5 (Bottom Pins & Master Pins) | 6 | 9 | 7 | 9 |
| B2 WRITE CONTROL KEY BITTING (2 thru 5 only) | 6 | 3 | 9 | 5 |
| B3 SUBTRACT smallest number from largest. | 0 | -6 | +2 | -4 |

If CONTROL KEY biting is smaller than B1, B3 will be a minus (-) number
 If CONTROL KEY biting is larger than B1, B3 will be a plus (+) number
 If CONTROL KEY biting and B1 are the same number, B3 will be a zero. Write a 0

H. Bitting chart.

place a minus (-) sign next to the determining biting on line (B3).

If the Control Key biting is larger than the bottom pin and Master pin bittings on line (B1) place a plus (+) sign next to the determining biting on line (B3).

If the Control Key biting and the bottom pin and Master pin bittings on line (B1) are the same, place a zero (0) on line (B3). The Corbin-Russwin pinning kit contains plus (+) and minus (-) pins.

Our bittings in the second, third, fourth and fifth chambers would now be: (See illustration H.)

| | |
|-----------------------|---------|
| Bottom & Master Pins: | 6979 |
| Control Key: | 6395 |
| Line (B3) | 0-6+2-4 |

The actual pinning chart can now be determined and would be as follows.

Bottom Pins

(write numbers from line (A4): 525315

Master Pins

(write numbers from line (A5): 24448-

Master Pins (write numbers from line (A6):-----

Control Pins (write numbers from line (B3): -0-6+2-4-

Top Pins

(write numbers from line (B1):

*M6395M

(M = a .247 top pin.

Once you have keyed the core and have checked all the keys, replace the spring cover. Place a new spring cover over the pin stacks and wedge it into the dovetail slot. To do this I use a flat punch cylinder along the centerline of the top of the spring cover and strike it with a small hammer. This wedges the slide down under and into the edges of the slot. (See photograph 5.) Again try all keys to be certain they operate properly.

Be sure not to stake the spring cover excessively hard. After you are through, replace the core in the



5. Replace the spring cover.

housing with the control key. You are now finished with that core.

For a more in depth study of the Corbin-Russwin interchangeable core you can buy a complete book on servicing the interchangeable cores and master ring cylinders from:

*G.L. "Gerry" Finch
 Locksmith Publications, P.O. Box 4009,
 Redondo Beach, CA, 90278.
 Phone: (310) 515-2643,
 Fax: (310) 217-1594, or
 E-mail: glfinch@ix.netcom.com.
 Or circle #287 on Rapid Reply.*

Corporate Safe with Electronics

by
**Dale W. Libby,
CMS**



The Corporate Safe is now showing up in the most unlikely places. This is an import safe from the Far East that has found many flustering and incorrect applications in the world of safe security. First, this is a light duty fire safe, not a heavy-duty money chest. Many businesses will purchase it for the wrong reasons.

Because a container has a handle and dial, this does not make it a money chest. The Corporate Safe and its many exact clones are well made and a good seller, but they are not for the storage or archiving of valuables. People buy the unit for the price and think they are getting a money chest. They are not.

Many customers also buy gun safes for oblique reasons: It looks good, it feels good, therefore it must supply great security. Plus, it is what I can afford. Most residential and small business purchases are based on what they, the customer, can afford, and not what they should buy to protect what they have. Accept it. Many customers buy what they can afford, not what they really need.

The Corporate Safe I will talk about comes in many different shapes and sizes, but the inside configuration of the electronic lock and relocker is exactly the same. Different handle positions are used, but the inside lock and bolt configuration is exactly the same on the LaGard electronic swingbolt locks.

I will go over everything you wanted to know about these locks and my attack procedures and reasoning therein. First, changing the two 9-volt

batteries that are hidden beneath the round (most popular) keypad can solve most problems.

The newer Corporate Safes have added a machine screw at the top of the keypad. The purpose of this screw is to keep the keypad from being knocked off the safe door and probably for shipping intentions as well. Just remove the screw, raise the keypad and you will locate the batteries. Replace one battery at a time, being sure to inspect the battery leads and the attaching wires. If either of the wires are loose or broken, get out the trusty new leads and a soldering iron. Wire fatigue is one of the most popular causes of malfunctions in this type of lock set-up.

After attaching the new batteries, wait for about 5-minutes. Try the owner's combination. If the combination does not work or if the keypad will not input the information you are pressing, it is time for the trusty drill. If you do not have the bypass combination, or it will not work, then it is time for the drill.

Drilling a Corporate Safe is easy. Average time is about 10 minutes or less, with a battery operated cordless drill.

Where we drill is a specific location for the end of the little solenoid that

keeps the swingbolt from turning. I will show you how to determine this drill point in a matter of seconds.

Sometimes the LaGard lock comes with a "bypass" number on a tag on the back of the lock. Unfortunately, on the Corporate Safes, a large relock plate covers this number up when installed. If you drilled for the side or top of the safe to view this number, it would be much more trouble than it was worth. If the lock is malfunctioning, then this number would not work anyway. Drill from the front, replace the lock and dial, and collect your money.

One of the bad things about the swingbolt lock is the price of the lock and keypad. Sometimes the price for opening, new lock and repair will cost more than the safe did originally. That is the customer's choice.

Let us take a little side road here. If we did have the override number, how would we use it?

To open the LaGard lock when it is working, six numbers are pressed on the keypad, the solenoid is energized the locking pin is pulled in and the opening handle is turned to force the lock bolt to turn into the lock case body. The safe is open.

If you have the override combination and must use it, just enter it as you would a real combination. It is made up of six

digits and is different on every lock. It is set at the factory and cannot be changed.

When the override combination is entered, it automatically changes the combination of the lock to 5-5-5-5-5. Now just enter the six fives, and the safe will open. Once the safe is open, you can now change the combination. I use the mnemonic saying of 0,1,2. First, enter six zeros on the keypad. Then enter the old combination (5-5-5-5-5) once, wait for the 2 beeps, and then enter any new six numbers, twice. (5-4-3-9-8-7, wait, 5-4-3-9-8-7) and you are done. Be sure to try the new combination with the door open. If you made a mistake the combination will retain the old one of 5-5-5-5-5.

This same sequence is used when just changing the combination on a working lock. With practice, it will take less than 30 seconds to change the combination correctly, assuming no time delays are needed on the safe.

Last week, little Tommy Powers and I opened seven safes or vaults in one 12-hour day. Whew, what a lot of work. The first two units were Corporate Safes, both with electronic LaGard locks. Each unit was unique. One had a hopper and the second one

had a storage compartment. Both safes were opened in less than fifteen minutes, combined.

The lock itself in these units tells you how to proceed. It takes longer to tell you about it than to do it. Here we go.

1. Remove the screw keeping the keypad from moving upwards and remove the keypad gently. This is done by gently pushing the pad up and over the mounting screws on the safe door.

2. Pull the wire connecting the dial to the combination lock tight in the spindle hole and look in. Because LaGard locks of the swingbolt variety use a "Cable Channel Cutout", it is instantly apparent how the lock is mounted. In our case, the wire went down from the spindle hole, thus telling us that the bolt was up, or in the vertical-up position. If the cable goes up in the hole, then the bolt is down. If the cable goes left, the bolt is right. This applies for both the 8 and 4 wire cables.

Bolts move right to open



1. The flat side of the bolt is impacted by a bar and swings into the lock to let the safe open.

3. Now we must determine the flat side of the bolt position. The solenoid is on the same side of the lock that the flat of the swingbolt is. Some call this positioning the mount and swing chart, I call it determining the flat location. On this general type of safe, if the lock is mounted

The National Locksmith's
AUTOSMART



by Michael Hyde

2001

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FOR PROFESSIONAL LOCKSMITH USE ONLY

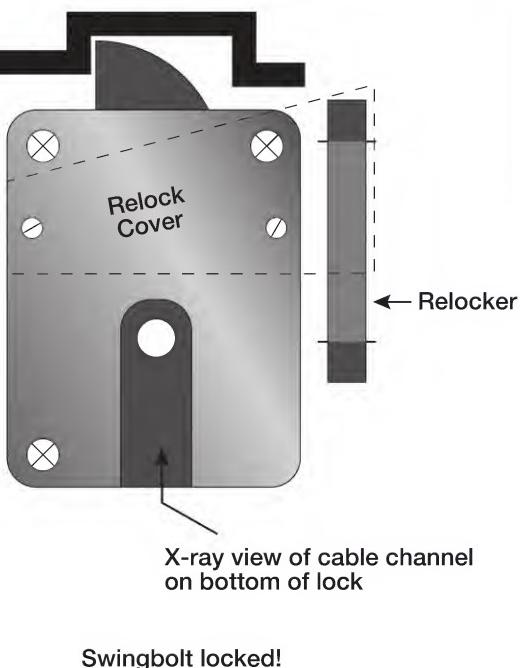
AutoSmart

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Boltbar → Moves right



2. This safe and others of its ilk use a vertical-up relocking device that sits next to the lock.

vertical-up or vertical-down, then the flat is always toward the opening (opposite the hinge) side of the safe. If we look at the safe from the front, and see that the hinges are on the

right, the bolts have to move to the right to open, thus the flat must be to the left. The flat side of the bolt is impacted by a bar and swings into the lock to let the safe open. (*See illustration 1.*)

4. Knowing that the flat is to the left and that the lock is mounted vertical-up, we measure 1-1/8" up from the center of the spindle hole and 3/8" left towards the flat side of the swingbolt. Here we penetrate the safe door and the safe lock. This position will drill off the end of the solenoid. Remove the drill and bit and turn the handle to open. I use a 3/16" drill bit for this. If, for some reason you are not exactly on, a 1/4" bit can now be used. The lock is history.

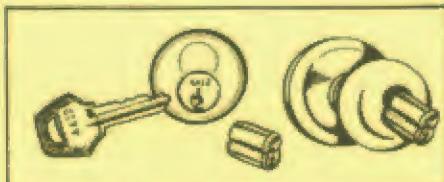
Now, with the safe open, you can tell the customer the price of a new electronic lock, or even tell him for a little less, you can install a new mechanical lock. The small hole can be welded and a new lock installed.

This safe and others of its ilk use a vertical-up relocking device that sits next to the lock on its right side, looking from the front. A large lid covers the end of the spring loaded relocking bolt. This metal lid is attached to the two mock cover screws on the back of the lock. (*See illustration 2.*) These screws are for the relocker, and do not hold on the back cover of the electronic lock. The three mounting screws hold on the lock and the cover. To open the relocker, drill to the hinge side of the lock and pry down the bolt, or hook and remove the activator spring. Either method will deactivate the bar blocking relocker.

Although this article is about the Corporate Safe, the methods of lock handing and swing identification, the information can be used on all LaGard electronic swingbolt safe locks. If the lock is mounted horizontal left or horizontal right, then the flat of the lock is harder to determine. If you are wrong, then go back to the index line and measure 3/8" in the opposite direction. There is no internal relocking device on these swingbolt locks.

Open, swing and prosper! **TNL**

The National Locksmith
 Guide To:



INTERCHANGEABLE CORE CYLINDERS

textbook

With step-by-step instructions
by Dan O'Shull

Interchangeable Core Cylinders

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- Best A3
- Best A4
- Corbin X Removable Core
- Corbin Z Removable Core
- Russwin Removable Core
- Emhart System 70 Removable Core
- Sargent Removable Core
- Schlage, Yale, Lockwood
- Medeco Removable Core

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#ICB - 1

The Gary Defiant



by Carl Cloud



1 • The top door of this Gary safe was a standard "C" rate construction. The lower door is the monster!

The mental picture that occurs when the name "Gary Safe" is spoken usually illustrates a basic line of safes. At one time, Gary produced a series of potent round door safes. A more recent inventory includes depository models, in-the-floor and TL rated units. Most of these are the 'slab' steel construction with a cladding option. Gary safes have always been well designed and had a good reputation within the security community. If you have never connected Gary and words like "formidable", "awesome" or "ominous", you haven't seen the Gary "Defiant!" (See photograph 1.)

The walls of this TRTL 30 safe are four inches thick. The massive composite door measures seven and one half inches from the door face to the inner surface. (See photograph 2.) The lock mechanism is surface mounted, adding another inch in depth to the center of the locking bolts. The mechanism is the same design as used in Gary's rectangular door burglary chests - the center locking bolt is always found midway of the door height.

The "Defiant" may be equipped with either a single lock or dual combination locks. This safe has two S&G 8500 series locks (see photograph 3) mounted vertical down and side by side. The two locks are fitted with extended bolts to activate the pivoting connecting bar. These locks are configured in a Fail Safe mode - either lock can open the safe. The handle is mounted directly under the left lock and turns clockwise to retract the door bolts.

The center locking bolt of the door is stopped by relockers. The one inch diameter bolt is machined to one-half inch on the opposite end. One square relocker bar is installed along side the left combination lock case, firing downward. This relocker is controlled by an arm secured to the lock case cover. The relocker bar drops behind the reduced diameter of the door bolt. A second relocker is mounted directly below and fires



2 • The composite door is seven and one-half inches thick.



3. Either of the S&G 8500 series locks will unlock the door. The locking bolts are the standard design used in the Gary TL rated safes.

upward. This relocker is controlled by a fusible link that will melt in the advent of a torch attack.

A drill point for the top relocker is 1-7/8 inches left of the dial center and 3-1/2 inches down. Add another 3/4 inch down for the lower relocker. Releasing a fired relocker can be a chore. The problem is aggravated by attempts to probe the relocker through the extreme depth of the door. When the relocker is fired, its square shaft does not automatically realign with the square receiving hole. After exhausting attempts to raise the square shaft to release the relocker, it is often an option to punch the relocker inward to free the door bolts.

How would you open one of these monsters? You have a couple of prerogatives. The cleanest method, if you have a scope, is to side drill and scope the change key hole. Measure up 1/2 inch from the center of the dial. Carry that measurement to the left edge of the body. Measure back on the side wall 9 inches. This is your drill point.

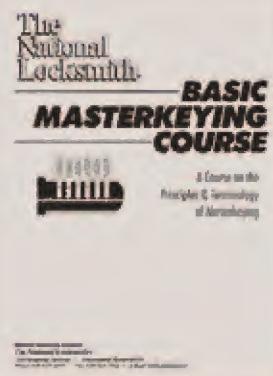
The inner door cover has a snap-in dome cap filling the hole over the change key hole. That cap will have to be removed with a long screwdriver or chisel-ended probe. Slide your scope into the hole and read the wheel combinations through the change key hole.

You can drill the door. The S&G 8500 series dial cannot be pulled. Use a hole saw and reduce the diameter of the dial. Your drill point will be 7/8 inch from the dial center on a line that would pass through 72. Mark this location on the dial ring before reducing the dial.

Yes, you will need some long drill bits to find the lock fence waiting at the bottom of a very deep hole. The composite construction of the door may require a carbide tip drill bit to speed the penetration. In addition, there is a piece of hardplate guarding the lock case.

The "Defiant" may be a challenge. But oh the thrill, when you feel the handle move and that massive door swings open! **TNL**

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#MK - 1

Quick Entry UPDATE

by
Steve
Young



TWO-DOOR HONDA PRODUCTS

Honda cars are one of my favorites to make keys for. I don't know of a single modern vehicle manufacturer that makes generating a new key as easy as Honda and Acura. Every single lock on the car, including the glove box lock, has the code number stamped right on the housing. This means that making a key to a Honda is just a matter of looking up a code and cutting the key once the vehicle is unlocked. I usually use the glove box lock to get the code, but on many cars there is even an easier way. If the inside trunk release (located between the driver's seat and the door) is equipped with a lock, it is only held in by one Philips head screw.

Easy key origination all changed in 1998 with the advent of transponders. Now in addition to generating a mechanical key you must also program the transponder system on many vehicles. For more information on transponders I recommend getting "The National Locksmith's Guide to Transponders" written by Michael Hyde.

Almost from the moment Honda introduced the new Accord Coupe in 1994, I've been getting calls from locksmiths who have had problems unlocking it. Things got worse the next year when the Civic Coupe came out with a door that was identical to the Accord Coupe on the inside. A 1999 Honda Civic Coupe is shown in photograph 1. In 1997 Acura, which is owned by Honda, introduced the CL series, which is almost the same door design. A 1997 Acura CL is shown in photograph 2.

All of these vehicles are very challenging to unlock if you don't know how the door is designed on the inside. Once you know the trick, they become

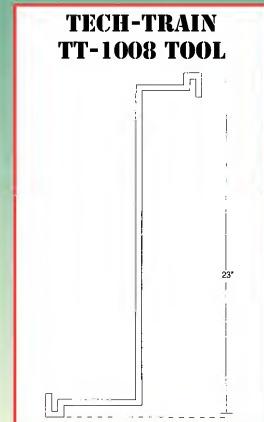
80 • The National Locksmith



1. A 1999 Honda Civic Coupe.



2. A 1997 Acura CL.



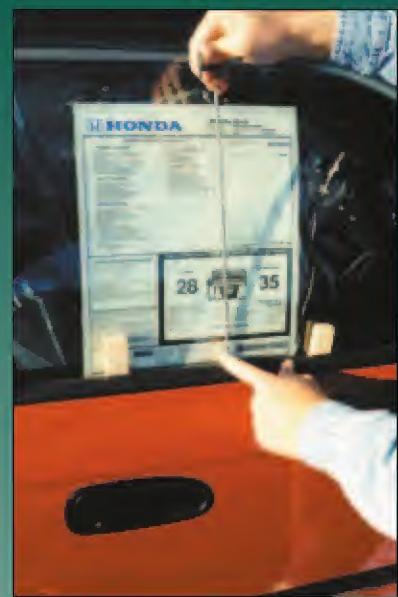
3. The Honda Civic door guard with tool in place.



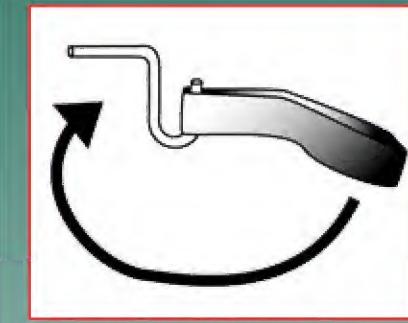
4. The Acura CL door guard with the tool in place.



5. Begin by wedging open the door just forward of the outside door handle.



6. Twist the top portion of the tool and lever the linkage rod toward the front of the car and unlock.



B. Loop duct tape over the end of the tool with the sticky side out.

easy to unlock with the Tech-Train 1008 tool. (*See illustration A.*) The real problem is the rigid plastic guard that surrounds both of the inside linkage rods. The Honda Civic door guard is shown in *photograph 3*. The Acura CL door guard is shown in *photograph 4*.

This guard extends all the way back to the window track and does a very good job of protecting the linkage. The only opening is at the forward edge of the guard, below the point where the guard attaches to the door. Even after you wedge open the door and insert an inspection light, you will not be able to see this opening. You will be able to see the forward edge of the guard, and that is all you need to see to unlock the car.

To unlock any of these cars, begin by wedging open the door just forward of the outside door handle and insert an inspection light. (*See photograph 5.*) Visually locate the forward edge of the plastic guard. Depending on the year of manufacture, the guard may be either black or white.

Once you have located the guard, insert the long end of the Tech-Train 1008 tool into the door and place it below the forward edge of the guard. (*See photograph 3 & 4.*) Rotate the tip of the tool toward the inside of the vehicle and then pull up on the tool so that the tip of the tool slips between the forward edge of the guard and the inner skin of the door. If you have the tool in the proper position, it will stop when the end of the tool has hooked on the inside lock control linkage rod. Twisting the top portion of the tool will bind the linkage rod into the hooked end of the tool. This will allow you to lever the linkage rod toward the front of the car and unlock the door. (*See photograph 6.*)

The tricky part is gripping the linkage. I've talked to many locksmiths who were able to locate the linkage easily enough, but just could not move

the linkage. On most of these cars, twisting the top of the tool will give you enough gripping power. But, on some of the later vehicles the rod is slightly smaller in diameter and is very hard to grip. My solution to this problem is simple - duct tape.

Tear off a strip of duct tape about 1/4" wide and 4" long and make a loop with the sticky side out. Wrap the loop completely around the tip of the tool before inserting the tool into the door. (*See illustration B.*) Hook the tool onto the linkage rod in the same way, but now the pad of duct tape will help grip the linkage as in *photograph 3*. This will make the job much easier.

You can also use double-sided tape instead of duct tape, but if you're like me, you always have duct tape around and it seems to work just as well.

A better method for adding a permanent grip to your tool is to use a small piece of plastic aquarium air line tubing. Most pet shops sell air line tubing for about ten cents per foot. Use a piece about 1/2" long with a slit running lengthways and snap it over the curved inner portion of the hook on your tool. If you wish, you can use a little contact cement to hold the plastic tubing in place.

Another use for aquarium air line tubing is to protect the end of the light

Quick Reference Guide

Vehicles:

Honda Civic Coupe 1995-1999; Honda Accord Coupe 1994-1997; Acura CL 1997-1999

Direction Of Turn:

(Passenger Side): Counter-Clockwise

Tool: TT-1008 (long end)

Lock System:
8-Cut Honda plate tumbler
(wafer tumbler)

Security System:

Vehicles made after 1997 may have transponder

Code Series:
5001-8442

Code Location:
All locks are coded

Key Blank:

Ilco X214, Silca HON58R,
Curtis/Ilco EZ HD103

Bitting:

Ignition 1-8, Doors 1-7

bulb in your inspection light. A piece about 1/4" long can be stretched over the end of the bulb to protect the glass. The tubing will actually help scatter the light more evenly and your bulb will last a lot longer.

The heat from the bulb is not enough to melt the tubing, but eventually it will lose its elasticity allowing it to fall off the end of the bulb. However, at ten cents a foot, it's cheap insurance for an expensive light bulb. **TNL**



THE CASH STATION

by Mark Gerhardt

Kumihara Safe

Manufacturer
Kumihara ATM.

Model #
ACT-6000 ATM.

Safe Manufactured by
Armor for Kumihara Safe Company.

Safe Model #
CH-F5.



Handle Type
L-Handle.

Handle Location
4-1/2" down from spindle hole.

Handle Rotation
Counter-Clockwise to open.

Dial Center to Handle Center
4-1/2".

Dial Location
9-5/8" down from top of safe.





Kumihara Safe

Number of Door Locking Bolts

One full length sliding plate.

Door Locking Bolt Locations

Opening edge.

Door Locking Bolt Diameter

N/A.

Door Thickness to Bolt Center

1-1/2".

Door Thickness to Lock Case

1".

Door Thickness to Back of Lock

1-7/8".

Lock Type

LaGard Smartgard 3332 swingbolt.

Lock Description

Digital combination swingbolt lock with electronic push-button keypad.

Lock Case Thickness

1-1/8".

Number of Wheels

None.

Driver Location

None.

Lock Handling

Vertical Up (VU).

Drop-In Location

None.

Forbidden Zone

None.

Lock Opening Procedures

Sequentially input the six-digit combination and turn handle.

Lock Drill Point

5/16" right of spindle hole. 1" up. Pry solenoid down.

Lock Relock Trigger Type

None.

Lock Relock Trigger Drill Point

None.

Lock Notes

LaGard SmartGard features an electronic push-button keypad. There is no spindle.

External Relock Device Type

Spring loaded plunger.

External Relock Device Type

1-7/8" left of dial center. 2-7/16" up from dial center.

Pry relocker down. 



The 1989 Audi 200 Quattro Wagon



by
Bob Sieveking

I was called by a local dealer to make keys for the 1989 Audi 200 Quattro you see in *photograph 1*. Thinking this would make a nice subject for an article, I snapped a few pictures.

The car was locked, so I used a strip tool through the edge of the passenger door to raise the lock button and what a pleasant surprise when I did. This vehicle has central locking, which means that as soon as I opened the passenger door, all the locks on the car unlocked. The rear door has a grip handle under the bottom edge that allowed me to open it. Nothing complicated here. The trim panel is held by a number of friction fasteners. Lift the trim panel with a wide trim tool, and it can be set aside.

The trunk lock and latch release mechanism is held in place by one metric socket head cap screw.

Remove the one screw as you see in

photograph 2. Remove two lock rods, rotate the assembly about 1/8 of a turn, and it will come right out.

Photograph 3, shows the lock assembly removed. The electrical connection is for the security system. It is not necessary to disconnect it.

The code for this vehicle was 8543. It is found stamped on the base of the assembly as you see in *photograph 4*. The code also appears on the side of the door cylinder assembly. The code letter prefix "AH" does not appear.

There are two different configurations used to cut keys in the AH/AN series. They are determined by the code series found on the locks. The code series AH/AN is the same as the HV, N, NV, and VB series. The code series are shown below with the appropriate code cutting information for: HPC 1200 CMB Card, Framon Space Block, Baxter Guide Key, Curtis Cam & Carriage and A-1 Pack-A-Punch.



1. A 1989 Audi 200 Quattro.



2. The latch release mechanism is held in place by one metric socket head cap screw.



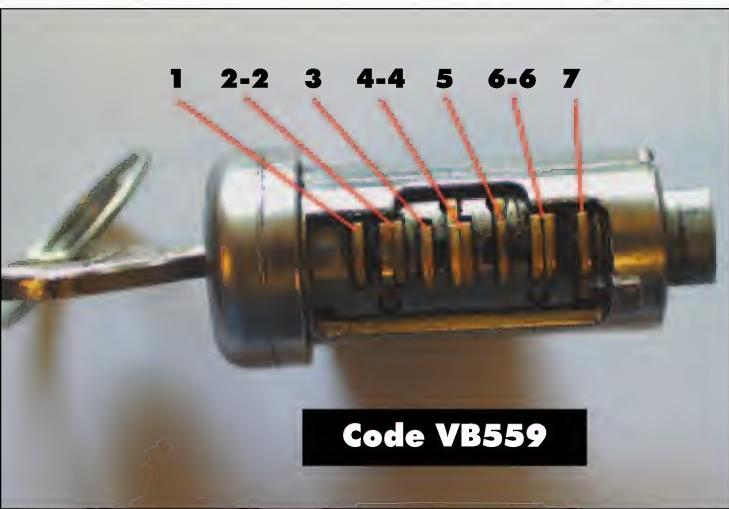
3. Rotate the assembly about 1/8 of a turn, and it will come right out.



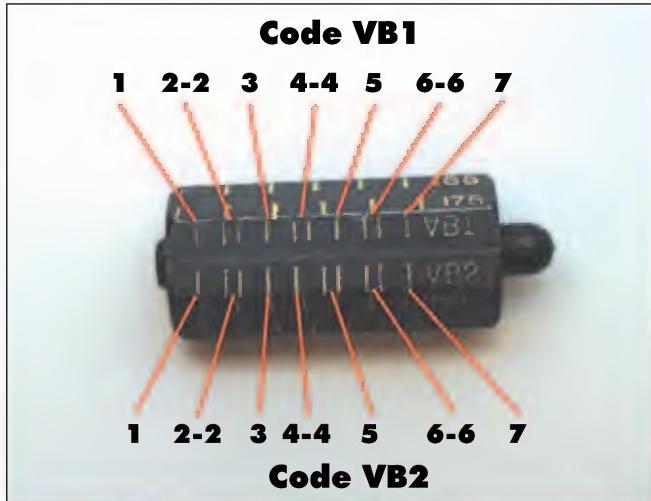
4. The code is found stamped on the base of the assembly.

| | | | |
|---|--------------------------|-----------------|------|
| Audi | 100-200 | 1989-94 | AU01 |
| Locks: ASP, AL, B&S | codes AH 1-9282 | Code | |
| Ign | valet 1-9282 | 7 6 5 4 3 2 1 | |
| dr | Baxter Bks 11827 | WIDE WIDE WIDE | |
| trk | NL:HPC FCB 1-25 | Cuts | |
| Face caps | Reed intr. listings* | | |
| Ign | Curt 19800 1200 XF4 | Ilco X139 | |
| dr NR | VW-3 VW-3C ctr CW-1011 | EZ V35 | |
| tnk NR | cutr 15W-45 space--depth | Tay X139 | |
| Keying kit | tumbler locations | B&S - | |
| Ign A-31-301 | .100 1 .300 | Bör 1382 | |
| dr+ A-31-301 | .185 2 .276 | Curt V-36 | |
| Gauge shldr German | .245 3 .252 | D/L NE62 | |
| gb | .330 4 .228 | SIL HU49 | |
| Framon: S-B-I VB1-2* | .420 5 | VALET | |
| Baxter: G-Keys FGK125+126* | .480 6 | Ilco X9 (old) | |
| *1-854=03-05-141,*1001-1918=03-05-152, | .560 7 | EZ 73VB | |
| *2001-2830=04-04-060,*3001-3890=04-04 | .620 8 | SIL HU48 (VO9) | |
| -066,*4001-5151=04-04-072,*6001-7086=0 | .700 9 | Curt - | |
| 4-04-079,*7101-8154=08-02-013,*8201-92 | .760 10 | X203/V37/ | |
| 82=08-02-019. Choose guide keys by *or code | .860 11 | Sub. V35P, WT10 | |
| listing. Code on d&t cyl. Disass., read, impress. | 10 wafers | | |

A. Keys made to operate the ignition must have doublewide cuts in three of the seven positions.



5. The plug from an ignition cylinder.



6. A Framon Space Block 2.

There are only 7 wafers in the door locks of the vehicles, which use these codes. There are, however, 10 wafers in the ignition cylinder. This places a higher level of security on the ignition function of the key. There are double wafers in three of the positions of the

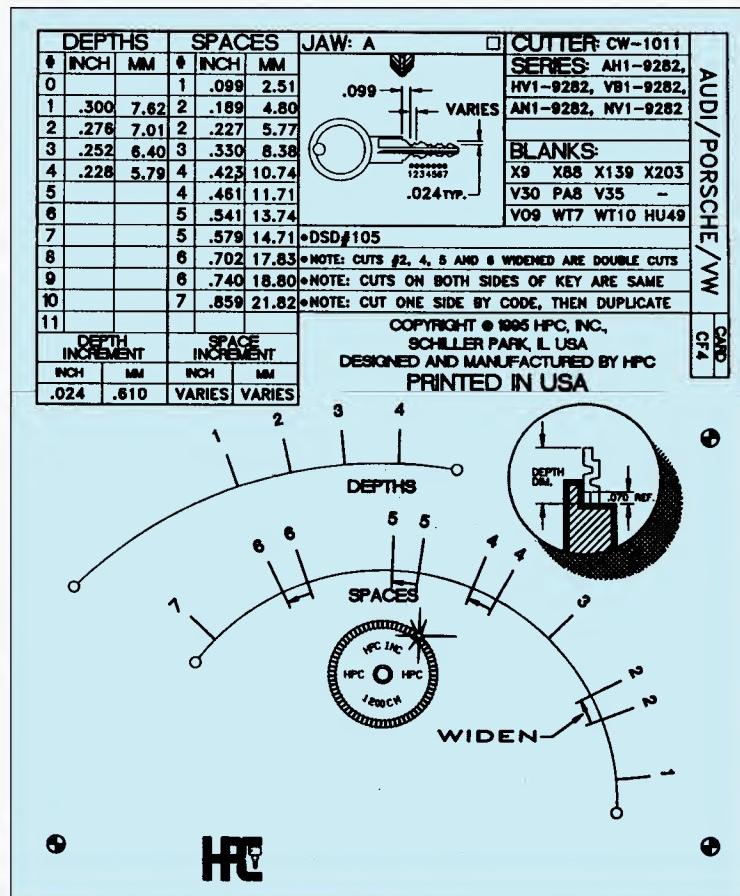
which illustrates the tumbler placement of ignition locks in the AH, AN, HV, N, NV, and VB series. You will see that there are 10 wafers in this lock. The code series for the ignition shown is VB559. The numeric (559)

key. The wafers are paired, double acting (they act on both sides of the key), and are always the same depth. Keys made to operate the ignition must have doublewide cuts in three of the seven positions. (See illustration A.) Some codes may be found which list these codes as if there were 10-cut positions, for example Curtis codes.

portion of the code series indicates that there will be double wafers in positions 2, 4, and 6. If the code had fallen in the range of 1001-1918, there would be double wafers in positions 2, 5, and 6.

Framon and Baxter methods for making this key are specific to the code series. This means that they only widen the necessary cuts. *Photograph 6*, shows the VB scales of Framon Space Block 2. You will note that the cuts are double, or widened, in positions 2, 4, and 6 of the VB1 scale. The cuts on the VB2 scale are widened in positions 2, 5, and 6.

The correct HPC 1200CMB code card for this series is CF4 and XF4. (See illustration B.) The cards are universal and embraces all codes in



B. The 1200CMB code card shows wide cuts in positions 2, 4, 5, and 6.

Photograph 5, shows the series by widening four of the cuts. The 1200CMB code card shows wide cuts in positions 2, 4, 5, and 6. This simplifies the key making process by eliminating the need to worry about which series the key is made for. **TNL**

The McGee Side

"Tain't Funny, McGee"

"I wonder if I could ask you a favor," the woman said timidly, after I handed her the keys I'd just cut, and was writing up her ticket. "Would you have any old keys I could borrow? Just for a few days."

"What do you mean by 'old keys'? Skeleton-style blanks for old locks?"

"No. Don't you have some used house keys that people have traded in?"

"We don't take trade-ins. However, I must admit, once in a great while somebody around here will mis-cut a key and we toss it in that can over there. Would some of those do?" I asked, plunging my fist into the half-full fifty-gallon drum.

"They would be perfect," she said. "Two or three dozen should be plenty. I'll bring them back on Monday, if that's all right."

As I was bagging the keys, my curiosity got the best of me. "If you don't mind my asking, what are you planning to do with all those keys?"

"Well," she began, "my son is

getting married Saturday night, and we're planning a little joke on him at the rehearsal dinner on Friday." A mischievous gleam lit her eyes. "I don't want to 'spill the beans' now, so I'll wait until I bring the keys back to fill you in on the details."

"Well, just be sure nobody tries to fit any of these keys into existing locks. That can sometimes create problems," I cautioned.

After she left, my thoughts reverted to a wedding we had recently attended where just such a situation had occurred. It had been one of those "blended family" occasions. The bride's parents and the groom's parents had each divorced and remarried at least once, over the years. So had some of the grandparents, resulting in myriad sets of grandparents, instead of the usual four, multiple "parents," and large families of step-brothers and step-sisters of the bride and the groom in addition to the nuptial couple's six "natural" siblings and all their children of various ages.



by
Sara
Probasco

Needless to say, this event had the church pretty well filled with "family," giving new meaning to the expression, "It takes a village to raise a child."

The bride insisted on directing every phase of the ceremony and reception herself. The problem was, so did the bride's mother. Mother and daughter loudly argued over every detail, from deciding how to swag the pews in endless yards of twisted purple and white tulle - seemingly placed so that guests would have the most difficulty stepping over it to find a seat — to how every woman who might be interpreted "mother" by any stretch of the imagination should be lined up to light the unity candle, no matter that they all hated each other's guts.

Further adding to the confusion, the pastor, who happened to be an uncle of the bride - or was it a step-uncle of the groom - had his own ideas about how certain traditional aspects of the service itself would and would not be carried out in his church, an attitude deemed narrow-minded by both the bride and her mother.

"Who gives this woman?" the pastor asked, once the ceremony began.

"Her mother and I do," answered the bride's stepfather, who had walked her down the aisle.

"Her stepmother and I do," answered the bride's father, who stood up in one of the front pews.

"We all do," chimed in a former stepfather, as he, his wife and a half-dozen other "parents" of the bride stood glaring across the church at one another.

That's when the bride pulled out a portable microphone and burst into a song entitled, "Butterfly Kisses," which she directed first to one "father," then another. I understand she'd always wanted to be a singer. After hearing her rendition of that song, I think I know why she never made it.



Thanks to Steve Guard of Dublin, Ireland, for this cartoon.

Halfway through the service, the bride, who had insisted upon facing the congregation, waved and smiled at various people while the pastor read the charge. Then she got the silly giggles during the vows and could scarcely respond.

A rumbling sound emanated from the heating system.

"What was that?" Don whispered.

"I think it was Emily Post, spinning in her grave," I replied, smiling.

At the close of the ceremony, all the mothers, stepmothers, and wives of various stepfathers huddled to light the unity candle from the two "family" candles that had been burning throughout the service. When they returned to their pews, something happened that seemed strangely prophetic: the unity candle went out.

The pastor quickly stepped over to enlighten it.

It went out again. No matter what, as if it had a will of its own, the unity candle stubbornly refused to remain lighted. The couple exited to the beat of a Christian rock tape, cued up in error, in place of the traditional Lohengrin recessional.

During the reception, one of the stepfathers approached Don. "Aren't you a locksmith? We need somebody to make a set of keys for the get-away car."

"The bride's two year old son was playing with the key ring during the ceremony and managed to lose it. Nobody could come up with another set, so some smart-alec took a key to a different vehicle of the same make and model, and tried to make it work," the man explained. "So now we have a jammed key broken off in the ignition and a bride that's madder'n a stirred-up hornet. You know, it's really kind of funny, when you look at it, but that young woman had no sense of humor at all."

Don looked at me and raised his eyebrows. "Sorry," he replied, smiling. "I can't help you. I'm from out of town, and I don't have any tools with me."

My thoughts returned to the present. "You know, it's interesting how often keys figure into weddings," I said to Don. "Remember the time somebody lost the key to the church organ on the day of that big wedding up in Floydada?"

"Yeah, and I told the bride's mother that it would take a couple days to

order one. But not to worry, that I had arranged for a guy with a portable organ to provide the music - providing somebody could look after his monkey during the service?" He broke into gales of laughter, remembering the look on the woman's face.

"I also seem to remember her saying your days were numbered," I said.

When our customer returned to the shop with the borrowed keys, the following Monday, we were anxious to hear how they had been used.

"Well," she said, "at the rehearsal dinner, one of the groomsmen secretly went from table to table at the restaurant, asking various young ladies who were dining there if they would be willing to participate in a little joke on the groom. Any who agreed were given one of the keys I had gotten from your shop. At an appropriate time, one of the girls in the bridal party approached the groom-to-be and said in a voice loud enough to be heard by all the dinner guests: 'Well, since you seem really serious about going through with this, I'd better give you back the key to your apartment. Goodbye. It's been great.' She kissed him on the cheek, laid the key on the table in front of him, and went back to her seat.

A titter swept over the guests. Then, one by one, young ladies from here and there in the restaurant began to come up, saying things like, "Me, too," or "It's been fun," or, "Gee, I'm going to miss you," they each added a key to the growing pile before the groom-to-be.

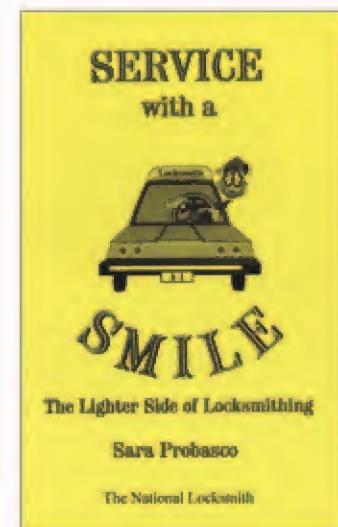
"Things like that tell you a lot about people," our customer added. "By the time this was over, everybody there was laughing, even the red-faced groom. Everybody, that is, except the bride. She didn't seem to think it was funny." "Why is it, some women just have no sense of humor?" Don chuckled.

"Maybe it's like that old radio program, 'Fibber McGee and Molly,'" I said.

"I don't get it," Don said. "You mean the part about Fibber McGee's closet?"

"No. I mean where Molly says, 'Tain't funny, McGee!'" **TNL**

Service with a Smile



To tickle the funnybone
of anyone in a service
oriented business.

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#SWS

BUSINESS BRIEFS

Dugmore & Duncan Appointments

Dugmore & Duncan appointed two new sales technicians. Steve Smith has been with Dugmore & Duncan of Massachusetts since January of 1991. Steve joined the sales department in January of 1999.

Bonnie Smith came to Dugmore & Duncan of Florida in 1997. Bonnie began training as a sales tech in the fall of 1998 and officially entered sales in January of 1999.

CCL Promotional Campaign

CCL Security Products will be launching its new promotional camping, "Lock around the CCLOCK" for locksmiths and locksmith

distributors. Each month until December 31, 1999, CCL will feature a different product line. The various promotions will include locksmith incentives and distributor discounts. For more information, go to: www.cclsecurity.com or e-mail CCL at: cclseprod@aol.com.

Rutherford Controls Now RCI

Rutherford Controls, Inc. is changing its name to Rutherford Controls International Corporation for Canada and the USA, and will be known as RCI. The new name and logo will symbolize the company's efforts to raise the bar on goals and expectations company-wide, as it continues to assert its reputation as a provider of

high-quality, affordable security solutions.

For information visit the
web at:
www.rutherfordcontrols.com,
or call 800-899-5625;
Fax: 804-427-9549

**Schwab Corp.
Presents Rep Group
Award**

Schwab Corp. announced Wilson Associates as the recipient of the Rep Group Award for 1998.

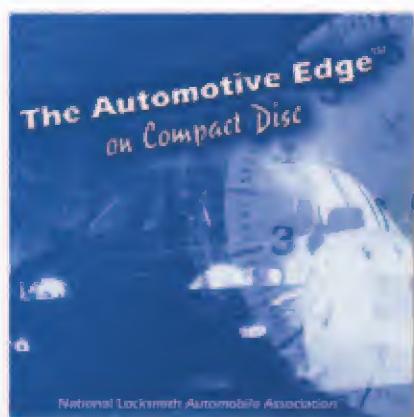
Wilson Associates covers the six New England states and Northern New York State for Schwab. With a force made up of seven sales reps and two customer service agents, the group achieved sales 25 percent above its initial expectations for 1998.

Meilink Safe and Hayman Safe Companies End Alliance

Van Carlisle, president of Meilink Safe Company and Gary Hayman, president of Hayman Safe Company, announced the end of their strategic alliance. The two companies have been working together for the past two years marketing each other's product lines.

Meilink's recent acquisition of NKL Industries Ltd., caused the two companies to agree to end the relationship. Many of the products Hayman manufactures are competitive with NKL's product line. The NKL purchase also included their Gary Safe Subsidiary, which has additional similar products.

AutoEdge

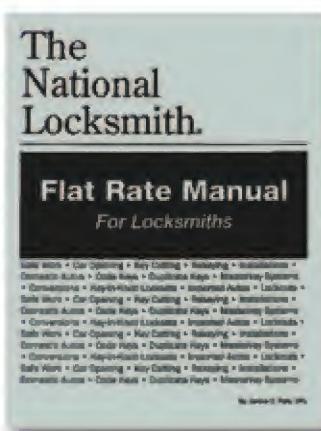


This CD contains over
750 pages of automotive
locksmith service.

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#AE - CD

Flat Rate Manual



Now you can
easily "Price
for Profit!"

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#FRM - 1

Strattec Announces Four Management Changes

Strattec Security Corporation has made four changes in its top management structure and created a new position as vice-president-business operations.

Harold M. Stratton II, formerly president & CEO, was elected to the new position of Chairman of the

Board. Mr. Stratton will retain the title of CEO. John G. Cahill, formerly executive vice president & CFO, was elected president and COO. Patrick J. Hansen, formerly corporate controller, was elected vice president & CFO. Michael R. Elliott, formerly vice president-sales and marketing, was elected to the new position of vice president-global market development.

Auth-Florence Acquires American Device Manufacturing Co.

The Auth-Florence Manufacturing Company, has acquired the postal specialties line from the American Device Manufacturing Co., a member of the DORMA Group, Reamstown, PA. Terms of the acquisition were not disclosed.

This acquisition will allow both Auth-Florence and American Device postal specialties customers an expanded product selection. Sales, customer service and

manufacturing operations are already fully integrated into the Auth-Florence operation.

Detex Announces Key Senior Management Promotions

Detex Corporation has announced two key promotions at senior management levels. Phillip N. Haselton, who has served as President of Detex Corporation since 1994, has been named chairman and CEO.

Concurrently, John H. Blodgett, vice president and general manager of Detex was promoted to the position of president and COO, succeeding Phillip N. Haselton in that position.

TNL



**Harold M.
Stratton, II**



John G. Cahill



**Patrick J.
Hansen**



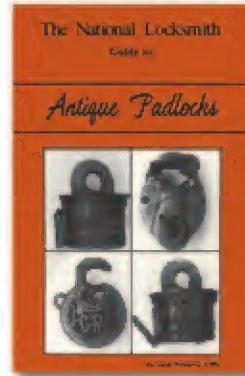
**Michael R.
Elliott**

Antique Padlocks

Finally there is a book to give you all the information you need about old interesting locks.

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#PAD - 1

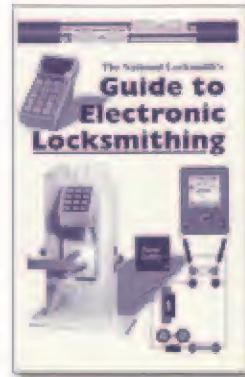


Electronic Locksmithing

Everyone knows there's big money in selling, installing and servicing electronic security such as mag locks, electronic strikes, and simple access control.

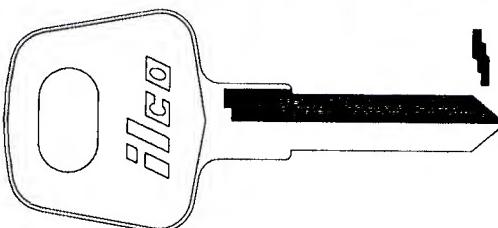
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#EL - 1



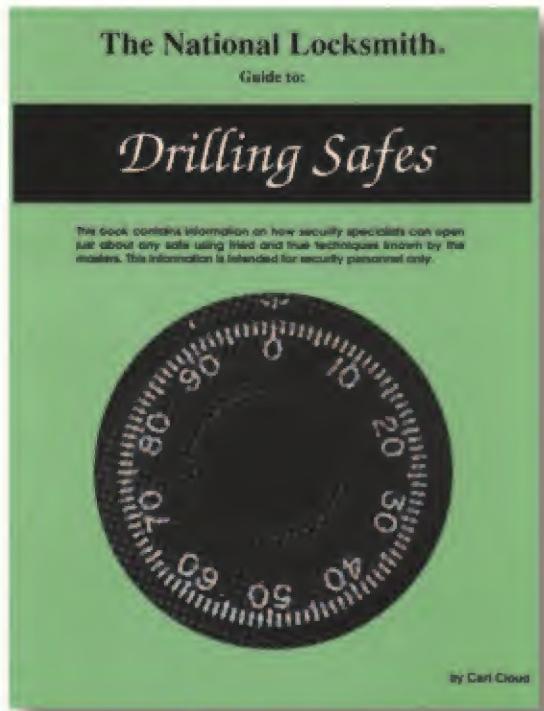
KEY CODES

**Audi
Series
AH1001-
AH1918**



**The HPC 1200CMB
and 1200PCH code
card for this code
series is between
pages 102-105.**

Drilling Safes



One of the most expert satemen in the country, Carl Cloud has written a very important book on safe opening.

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#DS - 1

Manufacturer: Audi

Code Series: AH1001 - AH1918

Spacings:

1 -.100
2 -.195 -.240

Key Blanks

Curtis: V35

3 -.334

ILCO: X139

4 -.437

ILCO EZ: V35

5 -.548 -.594

Silca: HU49

6 -.705 -.751

7 -.870

Number of Cuts: 7-10

M.A.C.S.: 3

Depths:

1 = .299

Key Gauged: Shoulder

2 = .273

Center of First Cut: .100

3 = .248

Cut to Cut Spacings:

Varies. Cuts 2, 5 and 6 are double cuts. Widen cuts.

4 = .226

Cut Depth

Increments: .025

HPC 1200CMB

Code Card: XF4 or CF4

spacing block VB2 only.

Cutter: CW-1011

Block #: 2

Jaw: A

Depth Increments:

Gauge From:

.024

Shoulder

Curtis

HPC Punch

Cam-Set: WW-3

PCH Card: PF4

Carriage: WW-3C

Punch: PCH-1011

A-1

Jaw: A

Pack-A-Punch:

HPC CodeMax

PAK-90V

DSD #: 105

Silca

Cutter: CW-1011

Unocode card No.:

Jaw: A

50

Framon

ITL

Cuts Start at: .100

ITL Manufacturing

Spacing: Use

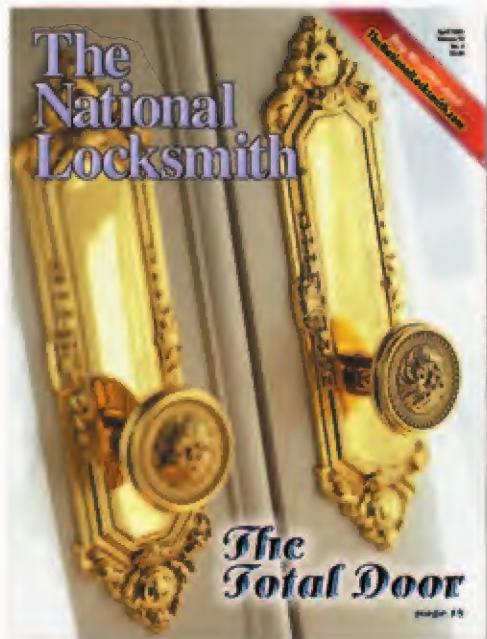
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|--------|---------|--------|---------|
| AH1001 | 3132244 | AH1021 | 1112243 |
| AH1002 | 1122243 | AH1022 | 3111243 |
| AH1003 | 3111244 | AH1023 | 2113244 |
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| AH1005 | 1133244 | AH1025 | 1132243 |
| AH1006 | 2134244 | AH1026 | 2112244 |
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| AH1013 | 3123243 | AH1033 | 3122243 |
| AH1014 | 2122244 | AH1034 | 2112244 |
| AH1015 | 1121244 | AH1035 | 1123244 |
| AH1016 | 3113244 | AH1036 | 2122233 |
| AH1017 | 2121243 | AH1037 | 1121233 |
| AH1018 | 1124243 | AH1038 | 1124244 |
| AH1019 | 3132243 | AH1039 | 3124244 |
| AH1020 | 2134243 | AH1040 | 1121243 |

Audi Series

AH1001-AH1918

| | | | | | | | | | | | |
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| AH1041 | 3113243 | AH1078 | 1334414 | AH1115 | 2331414 | AH1152 | 3121434 | AH1189 | 2123433 | AH1226 | 1122343 |
| AH1042 | 2121244 | AH1079 | 3323413 | AH1116 | 3321413 | AH1153 | 1132433 | AH1190 | 1132434 | AH1227 | 3111344 |
| AH1043 | 1113244 | AH1080 | 2322414 | AH1117 | 2333414 | AH1154 | 2112434 | AH1191 | 1134433 | AH1228 | 2131343 |
| AH1044 | 3112244 | AH1081 | 1321414 | AH1118 | 1322414 | AH1155 | 3133434 | AH1192 | 3134434 | AH1229 | 1133344 |
| AH1045 | 2133243 | AH1082 | 3313414 | AH1119 | 2332413 | AH1156 | 2113433 | AH1193 | 3432134 | AH1230 | 2134344 |
| AH1046 | 2124243 | AH1083 | 2321413 | AH1120 | 1333413 | AH1157 | 1112434 | AH1194 | 2431133 | AH1231 | 3123344 |
| AH1047 | 3131243 | AH1084 | 1324413 | AH1121 | 2324414 | AH1158 | 3131434 | AH1195 | 2434134 | AH1232 | 2132344 |
| AH1048 | 2123244 | AH1085 | 2334413 | AH1122 | 3332413 | AH1159 | 2111433 | AH1196 | 3423134 | AH1233 | 1131343 |
| AH1049 | 1123243 | AH1086 | 1312413 | AH1123 | 1331414 | AH1160 | 1113433 | AH1197 | 2432134 | AH1234 | 3134343 |
| AH1050 | 3122244 | AH1087 | 3311413 | AH1124 | 3312413 | AH1161 | 3122433 | AH1198 | 3434133 | AH1235 | 2112343 |
| AH1051 | 2131244 | AH1088 | 2313414 | AH1125 | 2323413 | AH1162 | 2111434 | AH1199 | 3423133 | AH1236 | 1134344 |
| AH1052 | 3121243 | AH1089 | 3321414 | AH1126 | 1332414 | AH1163 | 1123434 | AH1200 | 2422134 | AH1237 | 3123343 |
| AH1053 | 2133244 | AH1090 | 3323413 | AH1127 | 1333413 | AH1164 | 3124433 | AH1201 | 2421133 | AH1238 | 2122344 |
| AH1054 | 1122244 | AH1091 | 2312414 | AH1128 | 3334414 | AH1165 | 2122433 | AH1202 | 3433133 | AH1239 | 1121344 |
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| AH1077 | 2312413 | AH1114 | 3322414 | AH1151 | 2113434 | AH1188 | 3112433 | AH1225 | 3132344 | AH1262 | 1124344 |



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#SUB - 1,2,3,4,5,6

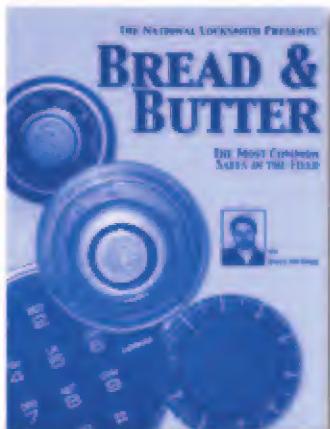
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Audi Series

AH1001-AH1918

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Bread & Butter

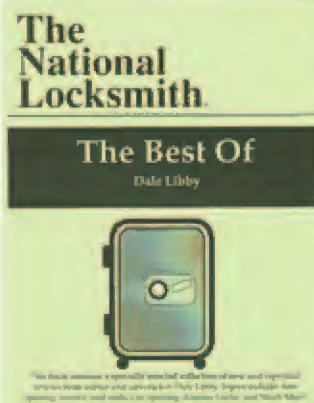


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#BB - 01

The Best of Dale Libby



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#DALE

This book includes the best articles written by Dale Libby over the course of many years, going back well over ten years! Now you can have this terrific collection of safe opening articles, automotive articles, and more.

Audi Series

AH1001-AH1918

| | | | | | | | | | | | |
|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
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| AH1493 | 2212413 | AH1530 | 3222414 | AH1567 | 2423144 | AH1604 | 2113423 | AH1641 | 3432124 | AH1678 | 1233144 |
| AH1494 | 1234414 | AH1531 | 2231414 | AH1568 | 3422144 | AH1605 | 1112424 | AH1642 | 2431123 | AH1679 | 2234144 |
| AH1495 | 3223413 | AH1532 | 3221413 | AH1569 | 2431144 | AH1606 | 3131424 | AH1643 | 2434124 | AH1680 | 3223144 |
| AH1496 | 1221414 | AH1533 | 2233414 | AH1570 | 3421143 | AH1607 | 2111423 | AH1644 | 3423124 | AH1681 | 1211144 |
| AH1497 | 3213414 | AH1534 | 1222414 | AH1571 | 2433144 | AH1608 | 1113423 | AH1645 | 2432124 | AH1682 | 2232144 |
| AH1498 | 2221413 | AH1535 | 2232413 | AH1572 | 2432143 | AH1609 | 3122423 | AH1646 | 3434123 | AH1683 | 1231143 |
| AH1499 | 1224413 | AH1536 | 1233413 | AH1573 | 2424144 | AH1610 | 2111424 | AH1647 | 3423123 | AH1684 | 3234143 |
| AH1500 | 3233413 | AH1537 | 2224414 | AH1574 | 3432143 | AH1611 | 1123424 | AH1648 | 2422124 | AH1685 | 2212143 |
| AH1501 | 2234413 | AH1538 | 3232413 | AH1575 | 2423143 | AH1612 | 3124423 | AH1649 | 2421123 | AH1686 | 1234144 |
| AH1502 | 1212413 | AH1539 | 1231414 | AH1576 | 3434144 | AH1613 | 2122423 | AH1650 | 3433123 | AH1687 | 3223143 |
| AH1503 | 3211413 | AH1540 | 3212413 | AH1577 | 3132424 | AH1614 | 1124424 | AH1651 | 2434123 | AH1688 | 1221144 |
| AH1504 | 2213414 | AH1541 | 2221413 | AH1578 | 1122423 | AH1615 | 3124424 | AH1652 | 3421124 | AH1689 | 3213144 |
| AH1505 | 3221414 | AH1542 | 1232414 | AH1579 | 3111424 | AH1616 | 1121423 | AH1653 | 3433124 | AH1690 | 2221143 |
| AH1506 | 1232413 | AH1543 | 1234413 | AH1580 | 2131423 | AH1617 | 3113423 | AH1654 | 3431124 | AH1691 | 1224143 |
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| AH1515 | 2211414 | AH1552 | 2422144 | AH1589 | 3123423 | AH1626 | 3122424 | AH1663 | 2423124 | AH1700 | 3233144 |

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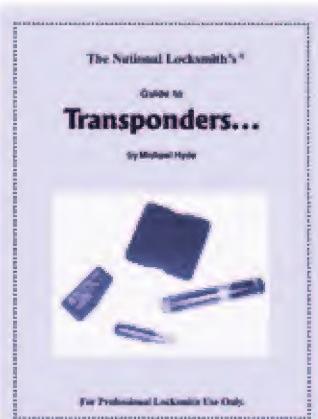
Audi Series

AH1001-AH1918

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#WLR - 1

Wafer Lock Reading

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Schlage's e.PRIMUS



by Sal
Dulcamaro,
CML



1

The Schlage DE series e.PRIMUS lockset.



2

Door preparation is minimal requiring a standard 2-1/8 inch crossbore.



3

Position the chassis through the 2-1/8 inch crossbore holes.

For years, those in the know have been urging locksmiths to start looking into access control. Some said "It's the wave of the future," others claimed "It's the security industry's biggest opportunity for profit." However, many mechanically oriented locksmiths are intimidated by the electronics of access control systems and avoid them. There is an inordinate concern about dealing with a n d h a n d l i n g electrical wiring. The resistance can range from the outright fear

of electrical shock to the legal requirements in the area of special training or locally approved permits.

Quite a few of the currently available electronic access control devices, however, have self-contained power sources and don't require the installer to run wires to power them. Many are able to get into this electronic specialty field with many of the mechanical skills they already possess.

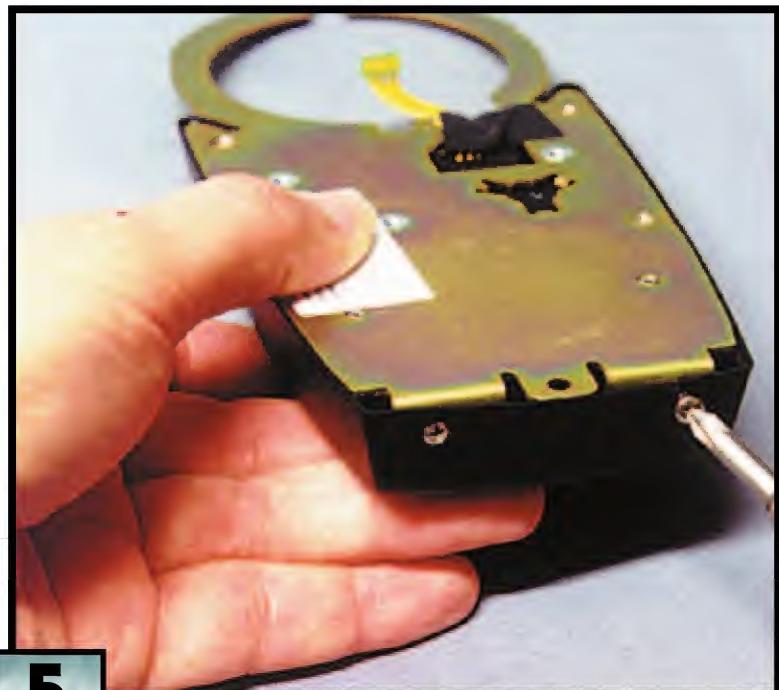
When it comes to access control and electronic locks, there is a lot to be said for the K.I.S.S. (Keep It Simple Stupid) principle. When I have a legitimate choice open to me, I prefer the lock that is simple to install. The less there is to account for and go wrong the better. If the specialty lock is ever removed from the door and standard door hardware is re-installed, I prefer that the door doesn't have to be replaced or patched to return it to its former condition. High quality and field upgradeability are always a plus.

For the locksmith who is hesitant to jump into the ocean



4

The inside electronics escutcheon.



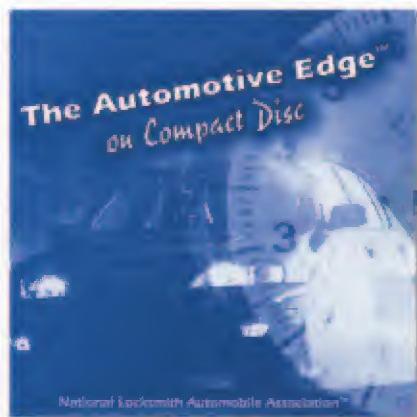
5

The battery cover is held on by two small Phillips head screws.

of access control, Schlage's e.PRIMUS might be just the right port of entry.

e.PRIMUS is Schlage's newest entry for stand-alone electronic access control. From what I've seen of it so far, it seems to be smartly designed. It has impressive capabilities and is easily installed. For locksmiths who aren't entirely comfortable in a world where many of the locks are no longer strictly mechanical, it might help ease some of their fears of the future.

e.PRIMUS is essentially two electronically modified Schlage lock platforms. Based on the D series cylindrical lever handle locksets and the L series mortise locksets, there are the electronically enhanced mechanical locks identified as the DE and LE series. Although the electronics and programming features are essentially the same, the



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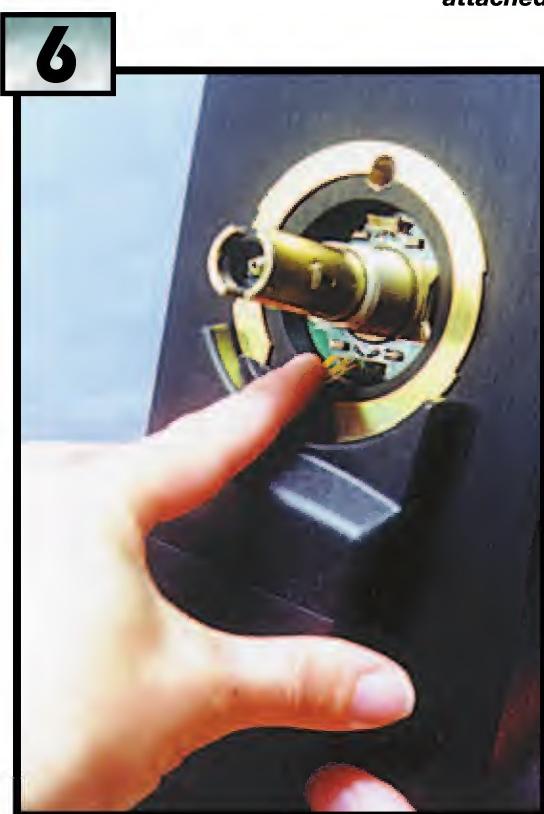
#AE - CD

May 1999 • 117

**The escutcheon
on the inside
of the door.**

**The inside
spring cage
being
attached.**

7

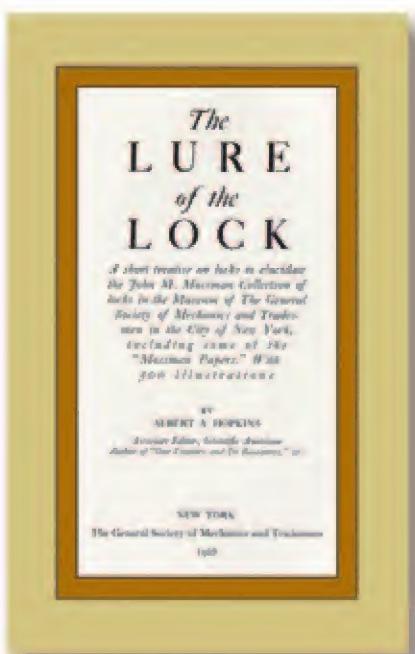


installation procedures will be different. In this article, I will only be dealing with the DE series (Grade 1) cylindrical lockset. Most of the references I make about programming or lock capabilities will also apply to the LE series mortise locksets.

DE Series e.PRIMUS

Photograph 1, shows the Schlage DE series e.PRIMUS lockset. It is built off the platform of the grade 1 Rhodes lever cylindrical lockset. The mechanical PRIMUS high security cylinder in the outside lever handle is intended for

emergency entry if the electronic keys are not opening the lock. Installation is not a whole lot different from the standard mechanical D series Rhodes lever. There are a few additional steps however, and some special considerations.



The Lure of the Lock

This hardcover book, compiled in 1928, features dozens and dozens of beautiful photographs on ancient through modern locks.

#LURE

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Door preparation is minimal when installing the DE series lockset. The standard 2-1/8 inch diameter crossbore is apparent in *photograph 2*. Just above and below that hole are the 5/16-inch diameter holes needed for installing a Schlage commercial grade leverset. There is no additional drilling required when switching from the strictly mechanical D series lever to the electronic DE series lever handle lockset. If a knob was previously installed, you would probably have to drill those two additional holes.



8

The blue electronic "test" key.



9

Attaching the castlenut.

One advantage of the e.PRIMUS product is that no additional mounting holes are required. If your customer has to restore the door to a mechanical lock, it won't be necessary to cover an assortment of unsightly extra mounting holes.

The lock will come pre-assembled in the box, so you will have to take some of the components of the lock apart before it can be installed on a door. After the latch is installed, position the chassis into the door through the 2-1/8 inch crossbore hole, as in *photograph 3*. Separate mounting posts on the outside escutcheon will fit through the 5/16-inch holes above and below

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For Professional Locksmith Use Only

by: Michael Hyde

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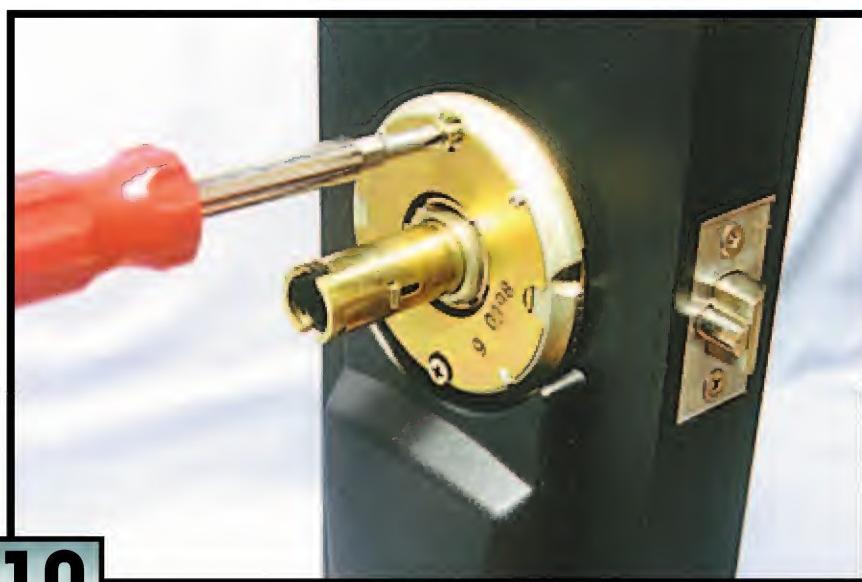
Some of the most profitable cars are also the trickiest to work on.

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#JAP - 1

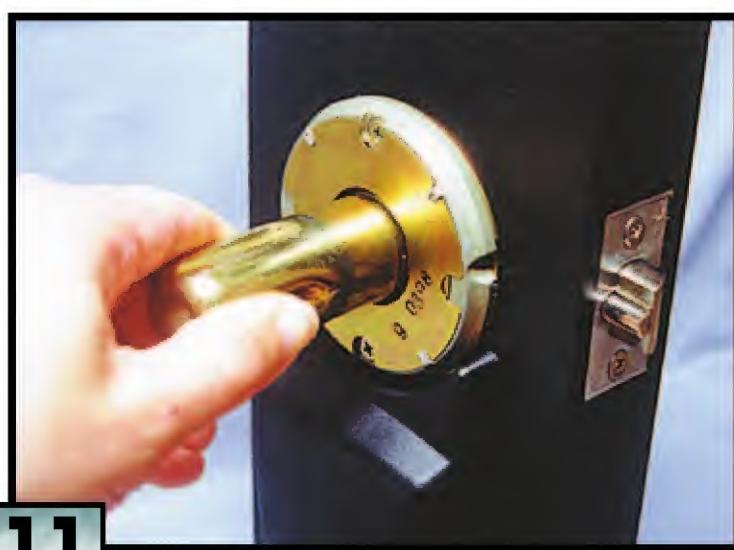


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10

Insert the two spring cage screws and tighten.



11

The castlenut being tightened with the castlenut wrench.



12

The inside driver and lever handle.

the main crossbore hole. Make sure that the wire, which runs between the outside escutcheon and lock chassis, is not pinched or damaged while seating the chassis into the crossbore hole.

The inside electronics escutcheon is shown in *photograph 4*. Before installing the electronics escutcheon, install the four AA (alkaline only) batteries. After the battery cover is put in place, it is held on by two small Phillips head screws. (See *photograph 5*.) The escutcheon is being positioned on the inside of the door in *photograph 6*. The wires should lay flat so they are not pinched by the surface of the door inside the crossbore hole during mounting. Its weight should be supported while connecting the wires between the escutcheon and the bottom connector on the chassis. Do not let the escutcheon hang by the attached wires.

While still supporting the escutcheon's weight, the inside spring cage can be attached as in *photograph 7*. The escutcheon can then be released because the spring cage will keep it from dropping. Before attaching the castlenut or screws, it would be wise to test the lock first to verify that the wires are properly connected and nothing is cut or broken.

Photograph 8, shows the blue electronic "test" key being placed near the touch receptor (or key port) to operate the lock. Excessive force should not be used in engaging the key. The center portion of the key must touch the center contact while the outside surface of the key must touch the inside surface of the key port opening. Only light contact is required. It will beep when contact is made.

The DE series locks are available in classroom (70) and storeroom (80) function. When you use the test key, the outside lever of the classroom lock will unlock (and stay unlocked) when touched by the key and relock when the key is engaged again. The storeroom lock's outside lever handle will unlock for about five seconds and then relock automatically.

After the lock has been tested and you confirm that it works properly, you can attach the castlenut, as in *photograph 9*. A special castlenut wrench is included in the box with the lockset. After placing the castlenut on the threads of the chassis, hold the outside lever and tighten it down. A ratcheting sound will be heard when you have it tightened enough. Excessive tightening can interfere with the operation of the latch.

The lever handle should be tested for free motion and adjustments should be made if it starts to bind. Insert the two spring cage screws and tighten them as in *photograph 10*. You want them snug but not over tightened. The castlenut is being tightened a bit more in *photograph 11*, with the castlenut wrench. The castlenut can be locked in place (to avoid loosening by vibration) by backing out the two screws very slightly, probably less than a quarter turn.

Photograph 12, shows the inside driver and lever handle. The white plastic piece in the lever engages the motion of the lever to the driver. The driver interlocks with the spring cage, which reinforces the return motion of the lever handle and minimizes the likelihood of sagging. The driver is being positioned to connect the spring cage in *photograph 13*. The rose is installed next.



13

The driver positioned to connect the spring cage.



14

One of two raised spots on the inside surface of the rose.

Photograph 14, shows one of two raised nub's on the inside surface of the rose. On opposite sides, the raised nub's fit over the deep grooves on each side of the spring cage. After positioning the rose over the spring cage, it is rotated clockwise to attach it. The nub's catch into smaller notches just above the large notch on one side and below the large notch on the opposite side.

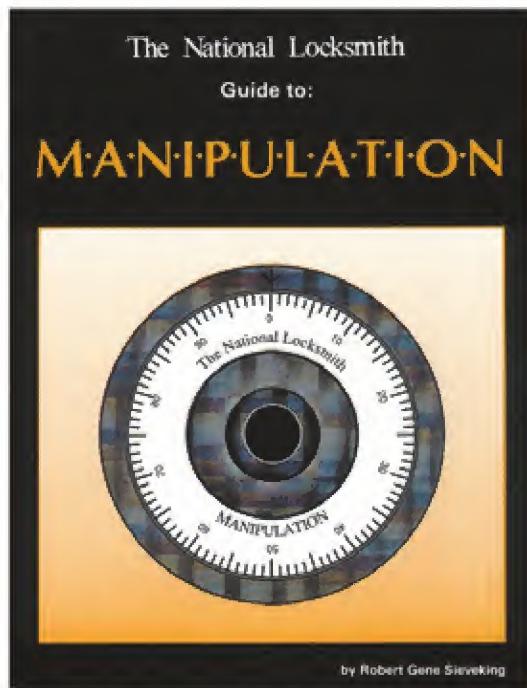
The inside lever is attached last. You just slide it in place until it catches. The spring-loaded lever handle retainer is slightly beveled on the outside, which allows the lever to be attached without depressing the retainer first. The retainer slightly compresses as the handle is pushed inward and then pushes through a slot in the neck of the lever handle to catch it and keep it from coming off. Removing the lever handle, however, requires a poke tool to depress the retainer first. The inside assembly is completed in *photograph 15*.

The standard mechanical D series lever lock has a symmetrical shape and it installs identically with either a left or right-handed door. The non-symmetrical shape of the outside escutcheon for the DE series lock, however, requires that you know the handing of the door before installation. The locks come from the factory right-handed, but are easily converted to left-hand in the field.

Changing the Handing for a DE Series Lock

Photograph 16, shows an inside view of the lock chassis. A thin circuit board attached to the housing has two places to plug to the inside electronics escutcheon. Because of the length of the wire, it could only reach the bottom connector. If the lock was turned upside down, the top connector would become the bottom connector. On the outside, however, you would have a problem. The key port would end up on the bottom when the lock was turned around. That would make for a very awkward operation. Hand changing,

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#MAN - 1



fortunately, is rather easy with the DE series locks. You will need the mechanical (bypass or override) key to do it.

Photograph 17, shows the bypass key "blank". The pin tumbler component of the PRIMUS cylinder is "0" bitted and can be coded to whatever combination you choose.

First you must insert the mechanical key and rotate it counter-clockwise one-quarter turn, as in *photograph 18*. A poke tool is then used to depress the retainer so the lever handle can be pulled off the lock. Next, the driver is removed in *photograph 19*. Finally, the castlenut must be removed with the wrench shown in *photograph 20*.

Adjusting for door thickness (rather than changing the hand) starts out the same, but lacks most of the later steps. If you were just going to adjust for door thickness, you would not remove the castlenut. Instead, you would either slightly tighten or loosen it until the correct thickness setting has been made. There is a scale printed on the paper template (used for hole drilling) that lets you set for proper door thickness. Once the nut is adjusted, the driver would be reattached and the lever handle reinstalled.

Returning back to the subject of changing the handing of the lock, the castlenut has now been removed. The outside escutcheon will now separate from the chassis but it is still connected by means of the wires shown in *photograph 21*. The wires must now be disconnected. Do not pull directly on the wires because they may break or separate. Instead, disconnect it by separating the connector halves.

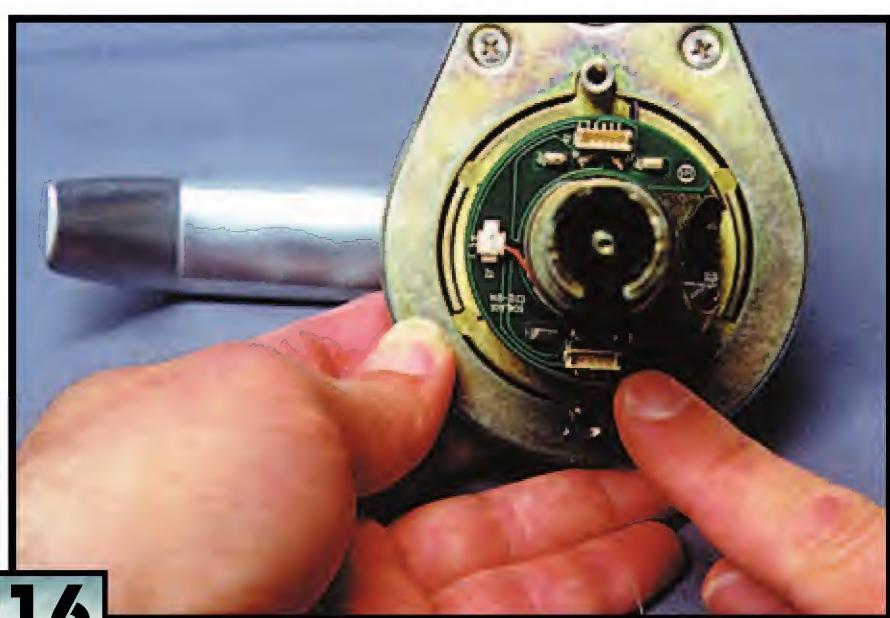
Once that is done, the outside escutcheon can be completely removed. The chassis is then reversed, as in *photograph 22*, and reassembled to the outside escutcheon. The wires coming from the chassis (that were previously connected to the outside escutcheon) are now on the bottom rather than the top. A second set of wires is now positioned at the top of the chassis, which should be connected to the wires coming from the outside escutcheon. The other wires should then be tucked inside the open space of the chassis, ready to be used again if the handing is ever changed back.

The castlenut must then be reattached and tightened. The driver is then reattached followed by the lever handle, identical to the reassembly procedure mentioned for door thickness adjustment. The lock will now assemble onto the door exactly the same as described earlier. The test key will confirm that you did no



15

The inside assembly is complete.



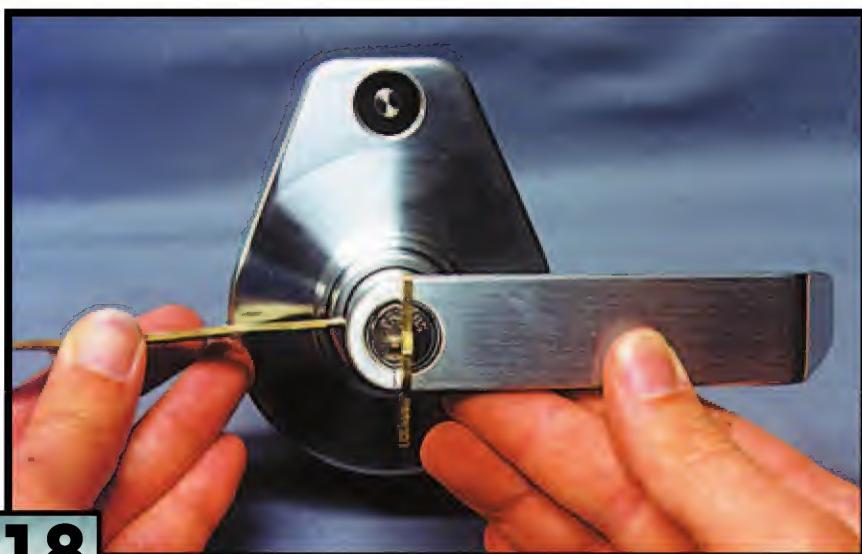
16

An inside view of the lock chassis.



17

The bypass key "blank".



18

Insert the mechanical key and rotate it counter-clockwise one-quarter turn.

damage to the wiring during lock hand changing.

e.PRIMUS- Lock Models and Capabilities

e.PRIMUS comes in three models. All versions use the iButton style electronic keys. The keys have a proprietary computer chip that is contained in a stainless steel cap and mounted in a plastic fob with a bow shape just like the Schlage metal keys. Each key has a unique serial number so keys can't be duplicated. The locks are designed to withstand tough environmental conditions. They have been tested for extreme temperature, humidity, shock, vibration and electrostatic discharge. While four AA batteries power the lock, a ten-year battery mounted to the circuit board within the lock maintains the lock memory.

Model 1 is recommended for smaller installations. It can store a maximum of 45 user keys and it does not have any of the time function or audit trail capabilities of either the Model 2 or 3. The electronic keys are programmed manually at the lock with an Add Key, Delete Key and Erase Key. The locks and keys have almost endless cross keying capabilities, with none of the normal negative consequences of cross keying in mechanical locks. It is not necessary that you have or use a computer to use or program the Model 1 locks.

Model 2 is designed for intermediate usage installations. Schlage RAPIDKEY software is required, as is a laptop computer to program the locks. The minimum system requirements is a Pentium 133 MHz, 32 MB RAM , 80 MB free hard drive space, CD-ROM and Windows 95 or 98. It has time function features and an audit trail. The maximum user key capacity is 840 with a minimum audit capacity of 10. The minimum key capacity is 30 with a maximum audit capacity of 550 events. Separately identified, user key capacity and audit event capacity are inversely proportional. As one increases, the other is reduced.

The Model 3 has generally the same features, but with a larger memory capacity. Its maximum key capacity is 1785 with minimum audit capacity of 10 events. Minimum key capacity is 30, and maximum audit capacity is 1180. It is recommended for high usage requirements. The DE series e.PRIMUS locks are upgradeable in the field. That means that a Model 1 can be converted to a Model 2, and a Model 2 can be converted to Model 3 with the addition of memory chips. The locks can change with the customer's needs.

Upgrading the DE Series Locks in the Field



19

The driver is removed.



20

The castlenut must be removed with the wrench shown.

One impressive feature of e.PRIMUS is that the locks can be upgraded quickly and easily in the field without soldering and without any real knowledge of electronics. *Photograph 23*, shows the backside of the (inside) electronics escutcheon. The circuitry and memory chips are contained within this unit. To gain access to the area where these components are, you will need to loosen four screws. You will need a relatively small Phillips tip screwdriver to remove the screws. Be careful about not using the wrong size to avoid stripping the heads of the screws. The tip of my screwdriver is pointing to the partially concealed screw.

Photograph 24, shows the circuit board and the open slots for the computer chips. This layout is for the originally released locks. Although the first versions had many impressive features, Schlage made additional improvements and ultimately changed the actual circuitry. I will also show the modified design and explain some of the changes.

In this earlier version Model 1 lock, the three empty slots indicate there was no time function capabilities or extended memory. The chip that fits in the slots is shown in *photograph 25*. It is exactly the same shape and size of the chip that attaches to a plastic fob and becomes an e.PRIMUS electronic key.

In *photograph 26*, this earlier version Model 1 lock has just been converted to a Model 2. One chip is for the clock function and the other is the first memory chip. Adding a second memory chip would make this a Model 3, with extended user and audit capability.

Photograph 27, shows a new version Model 2. One of two slots are filled. There is no longer a third slot because the time function is now integrated into the circuit board. With the new version, the Model 1 would have both slots empty. Model 2 is shown, and Model 3 would have memory chips in both slots. I suppose, in theory, you could say that the new version Model 1 does have the time function already built in. It just isn't activated until the additional memory is installed and the software is there to program it.

The memory chips look like oversized watch batteries and slip

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under a clip-like contact to install in an open slot. It is recommended that you use an ESB wristband or tether to connect you to the metal back plate while you install the chips to avoid electrostatic discharge.

In the original versions of the e.Primus locks, they offered certain advantages that a microprocessor based device would normally have over a strictly mechanical lock. The main advantage is the unique and individual keys that identify an individual user, with nearly endless cross-keying capabilities. In a mechanical lock, when the lock is made to no longer operate with a terminated employee's key, it would require distribution of new keys to everyone. With the electronic lock, one individual user key can be deleted without affecting anyone else.

21

The outside escutcheon will now separate from the chassis.



22

The chassis is reversed.

The Model 2 and 3 locks have the time function, and keys can be made to work certain days and even certain hours. A ring of electronic keys is shown in photograph 28. The blue one is the test key, the two gray ones are control keys and the two black ones are administrator keys. Other black keys can be programmed as individual user keys.

The Model 2 and 3 locks require the use of the RAPIDKEY software to program the locks. The administrator key (in conjunction with a password) is required to log on to the software. Without it, you can't program or audit the locks. Photograph 29, is a close-up of two of the electronic keys. There is an etched unique serial number on each key. That serial number can also be read electronically by a lock or the software. Photograph 30, shows the RAPIDKEY software and the cables needed to upload and download data between locks and a laptop computer. The iButton contacts connect to a coiled cable with a telephone style plug at the end. It hooks into a serial port plug (see photograph 31) which is connected to your computer. A separate cable in photograph 32, with iButton style contacts at each end allows communication between the locks and the computer.

Programming takes place by connecting one end to the iButton port of the other cable, and the other end to the key port of the lock. Programming downloads the information through the cables from the computer to the lock and auditing uploads

23

The backside of the electronics escutcheon.





24

The circuit board and the open slots for the computer chips.

the information from the lock to the computer. Locks are programmed, but the keys are not. The software can identify the keys when placed in one of the iButton ports.

New Features

Even the earlier version Models 2 and 3 could be programmed for individual key operation by time and day. Programmed holidays would keep selected keys from operating on what would otherwise be a work day; such as Christmas ending up on a Wednesday. While I was impressed with many of the features of e.PRIMUS, the new features are even more impressive.

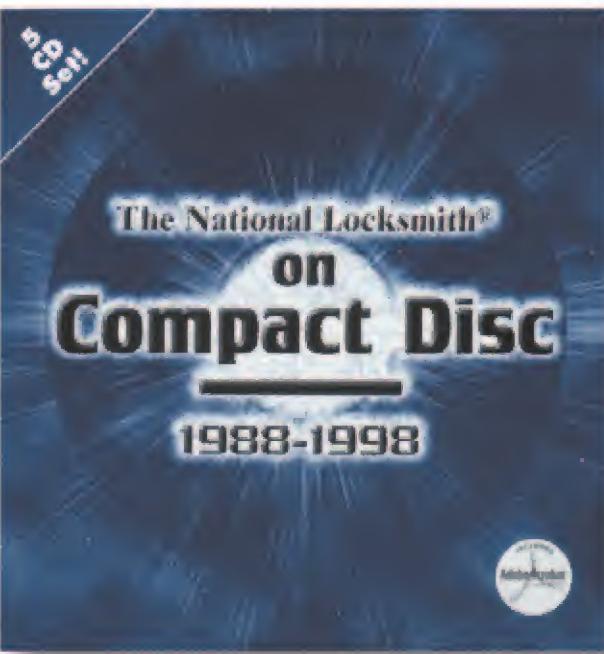


25

The computer chip upgrades.

TNL on CD

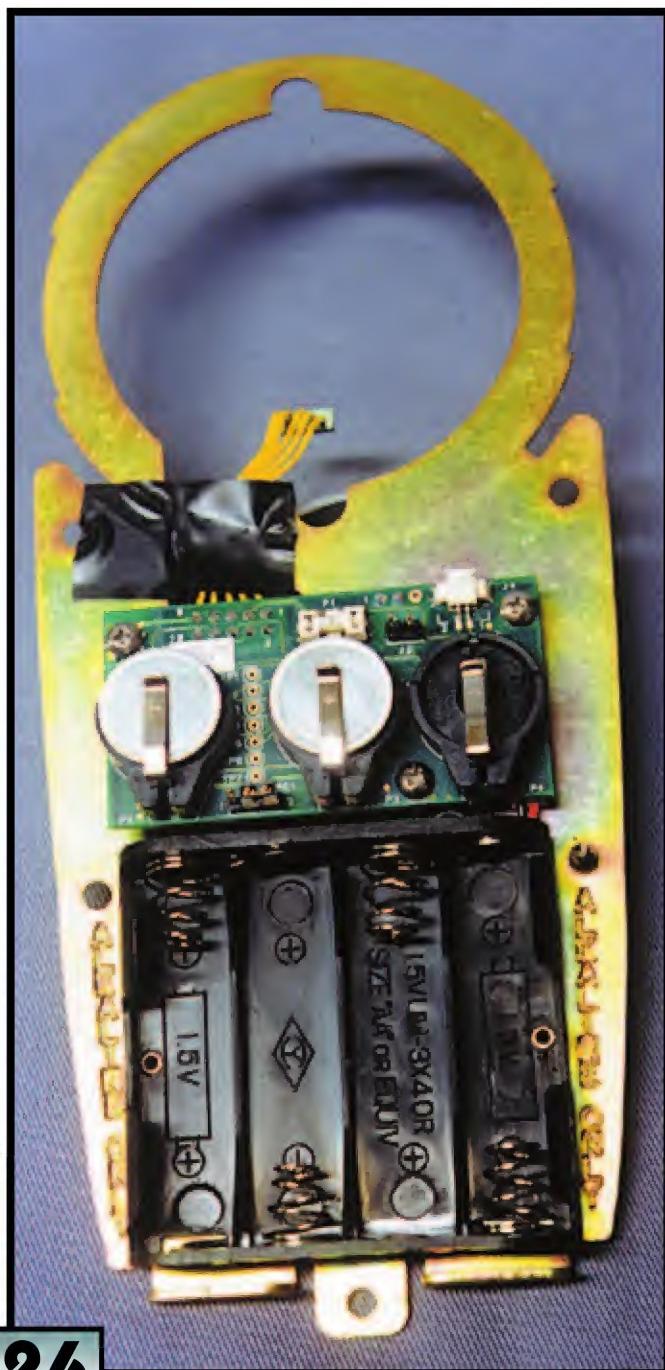
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#TNL - CD1

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26

Model 1 lock has just been converted to a Model 2.



27

A ring of electronic keys.

With the time function already integrated into the circuit board, the locks can now be programmed for automatic locking and unlocking without keys. A lunch or break room

can have a door lock programmed to open during break times and then relock after breaks. These functions can also account for holidays positioned on normal work days. Special keys would still allow authorized personnel to override automatic unlock or relock operations. Lock down keys can be made to lock out all keys, until reset.

28

A ring of electronic keys.

128 • The National Locksmith

One thing that really impressed me was the "Guest Key" concept. It is possible to program the lock to open with a temporary key assigned to work for a certain period of time. An out of town employee could be visiting a far flung branch office and the key can be designated to work from July 7 to July 9 at certain selected hours. The key would not work before or after the designated times, plus an



29

A close-up of two of the electronic keys.



30

The RAPIDKEY software and attachment cables.

audit will reveal unauthorized attempted entries.

The e.PRIMUS locks are available in either classroom or storeroom function in all three models. The DE series cylindrical lever lock is available only in the Rhodes lever handle design. Available lock finishes are: 605 Brass, 612 Satin Bronze, 613 Oil Rubbed Bronze and 626 Satin Chromium Plated. The LE series mortise locksets are also available in the same functions and finishes, but have three different lever handle designs. The system is designed to integrate with Von Duprin electrified exit devices, magnetic locks and other hard wired systems by installing a key touch receptor and electronic

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31

The iButton coiled cable hooks into a serial port plug.



32

A separate cable with iButton style contacts at each end allows communication between the locks and the computer.

TNL

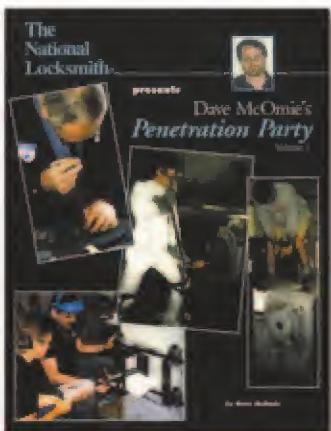
circuitry to allow the use of the e.PRIMUS keys.

Schlage provides free training (using the software and lock programming) for the end user. The earlier version e.PRIMUS locks will probably have the circuit boards upgraded to be compatible with the new version 3 software and to share all the capabilities of the new version e.PRIMUS locks.

I'm rather impressed with the e.PRIMUS product, and I hope to attend one of their product training sessions when I have the opportunity.

If you want more information about e.PRIMUS, contact Schlage Lock Company at: 719/264-5300. You may also try contacting Schlage area reps. or lock wholesalers. Circle #371 on Rapid Reply.

Penetration Party



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#PP - 1

Ford 8 Cut Decoding Key Set

**FORD 8 CUT
DECODING
KEY SET**

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#FD - 8

Taking
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TEST DRIVE!

Mad Mike's Manipulator is a safe manipulation aid available through Lockmasters Inc.

DESCRIPTION: This tool combines a triple beam infrared laser reader similar to that used for reading UPC codes, a LCD panel for taking accurate digital readings and a magnetic base. The reader/sender is attached to the safe door via a magnetic base and articulated arm. There is a sensing block attached to the center of the dial by double-faced tape. The reader senses the change in angular positioning of the right contact point of the drive cam. The concept is incredibly.

INSTALLATION: There is a black tape reflector that the infrared laser reads which is first attached to the dial. A manipulator arm that positions the infrared laser reader in perfect relation to the reflector block taped to the dial is then positioned on the safe. A magnetic base secures the manipulator arm. One of the drawbacks with this device is that it takes patience and a fair amount of time to set the unit correctly. It took me about 45 minutes to set the unit up the first time before it would read correctly. On subsequent setup times, it only took me 30 minutes to correctly position the manipulator on the door.

HOW IT WORKS: Manipulation of the common safe lock means the narrowing between the left and right contact points on the dial in relation to the opening index. When a gate is under the fence, it allows the lever nose to drop in the wheel gate. This ever so slight movement causes the distance between the left and right contact point to narrow or get smaller. This is an indication that

Mad Mike's Manipulator, by Lockmasters, Inc.



one of
the lock
wheels
has a gate under the fence.

This indication is quite small, and that is what Mad Mike's Manipulator measures. However, I must point out that this tool measures only the "Right" contact point, which is made by turning the dial to the left and stopping when the sloped valley of the drive cam contacts the lever nose.

When I was first learning to manipulate, we were taught to break down the distance between any single division into eighths, namely 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, etc. Later, Lockmasters manipulation course broke down the divisions into tenths. Mad Mike's Manipulator can break the distance or increments 100ths of a number that can be correctly and constantly read by the digital reader. First, the number of divisions between one number is determined after setting up the unit. The unit is then zeroed out at the contact point. Now the manipulation begins.

When the dial is turned to the right contact area, the digital reader will show a positive amount of numbers in relation to the divisional difference between each number of the contact area. When the number gets higher, that means that the contact point is not

moving back to original, but is getting smaller or deeper, and thus a possible gate in the wheel is indicated. You must determine which wheel is indicating.

PRICE: Mad Mike's Manipulator retails for \$495.00. The battery powered optical reader, digital display, position sensitive element and magnetic base are all included.

CONCLUSION: This is a good tool, however, if you cannot manipulate a lock to begin with, this is NOT the tool for you.

Will this tool make a manipulator out of someone who does not know how to manipulate a safe open? No, not even close. This tool is made for safe technicians, who already know how to manipulate, test for wheel gate indication, and know the drill for speed manipulation. This tool is a high-tech manipulation aide. There are no shortcuts here.

For more information on Mad Mike's Manipulator contact:

*Lockmasters, Inc.
5085 Danville, Rd.
Nicholasville, KY 40356-9531
Phone: 800-654-0637
Fax: 606-885-1731
Circle 291 on Rapid Reply. TNL*

IN SUMMARY:

DESCRIPTION: A digital safe manipulation aid.

PRICE: \$495.00

COMMENTS: If you cannot manipulate this is NOT the tool for you.

TEST DRIVE RESULTS: This is a good tool which does work, but requires setup time.